

FLIGHT

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CONTENTS

Editorial Comment:	PAGE
A 3-Nation Schneider? ..	873
Improving the Air Mail ..	874
The Latest Saro "Cloud" ..	875
Schneider Teams at Calshot ..	876
Private Flying and Club News ..	878
Gliding ..	881
Airport News ..	883
Air Transport: S.A.B.C.A. S.XI ..	885
Book Reviews ..	887
Airisms from the Four Winds ..	889
Royal Air Force ..	891
Air Post Stamps ..	892

EDITORIAL COMMENT



IF it had been carefully "publicity-managed," the contest for the Schneider Seaplane Trophy this year could not have secured a "better Press." First rumour has it that Italy will compete. Then that she will not. Again it is thought that she will. And so forth. The same with France. First we are told that France cannot possibly get her machines ready in time. Then comes a story that probably after all she can. Then again doubt, followed by a fresh hope that she may. Anything better calculated to keep excitement at fever heat would be difficult to imagine. And the remarkable thing about the whole matter is that this is no cheap "publicity stunt." Difficulties have cropped up unexpectedly both in France and in Italy, and the temperamental barometer swings between hope and fear in accordance with the latest test flight.

Even at this late date, but little more than a week before the date of the actual contest, the position is such that anything may happen—or nothing. French and Italian machines are reported to be on their way, but until they are actually uncased and erected at Calshot it would be risky to take anything for granted. And even if all the foreign machines arrive at Calshot and are erected and flown there, it is by no means certain that they will necessarily take part in the contest. It must be realised that time is lamentably short for getting any training over the actual Schneider course, and this is a handicap the severity of which is such as to be quite capable of making all the difference between winning and losing the contest, even with machines of the same speed.

No one regrets this state of affairs more than does Great Britain. The last thing we want is a "fly over." Our very good Italian friends have proved themselves excellent sportsmen. They have tried hard, and they have suffered grievous losses of fine pilots, as have we and as has also France. Losses such as these must inevitably bring the nations closer together, and the untimely death of a Schneider pilot of one nation is felt as a national loss by the aviation community of the other two.

DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list:—

- 1931
- Sept. 3-12. "Model Engineer" Exhibition, Royal Horticultural Hall, Westminster.
- Sept. 5. Boulogne Air Week ends.
- Sept. 5. Norfolk and Norwich Ae.C. Display at Yarmouth.
- Sept. 5. Haldon Flying Meeting.
- Sept. 6. Air Pageant, Sherburn-in-Elmet, Leeds.
- Sept. 7. U.S. National Air Races end, Cleveland, Ohio.
- Sept. 9-10. International Society of Airways' Congress, Budapest.
- Sept. 12. Schneider Trophy Contest.
- Sept. 16. "Development of Aircraft Manufacturing," Wilbur Wright Memorial Lecture, by Glenn L. Martin, before R.Ae.S.
- Sept. 17. Opening of L.G.O.C. Flying Club at Broxbourne Aerodrome.
- Sept. 19. Manchester Air Pageant, Barton.
- Sept. 19. All-Women's Aviation Meeting at Northamptonshire Ae.C., Sywell.
- Sept. 23-Oct. 11. French Two-Seater Light 'Plane Competition.
- Sept. 26. Garden Party, Bristol and Wessex Ae.C.
- Oct. 3. Cardiff Ae.C. Air Pageant at Splott Aerodrome.
- Oct. 3-4. International Gliding Competition, Bilsdean, Sussex.
- Oct. 8. Balloon Ascent, Lecture by Prof. Piccard before R.Ae.S.
- Oct. 15. "Protection of Metals in Aircraft Construction," Lecture by H. Sutton before R.Ae.S.
- Oct. 29. "Accidents in Civil Aviation," Lecture by Capt. A. G. Lamplugh before R.Ae.S.
- Nov. 5. "Safety in Spinning," Lecture by H. B. Irving before R.Ae.S.
- Nov. 19. "Aircraft Vibration," Lecture by H. Constant before R.Ae.S.
- Dec. 3. "Wheel Brakes and Undercarriages," Lecture by S. Scott Hall before R.Ae.S.
- Dec. 10. "Air Flow—Demonstrations on the Screen by Means of Smoke," Lecture by W. S. Farren before R.Ae.S.
- Dec. 17. "Control Beyond the Stall," Lecture by Dr. G. V. Lachmann before R.Ae.S.

Our sympathy should be most of all with France. After having for many years refrained from taking part in the Schneider contests, France decided last year to enter once more, and set to work at once to produce machines and engines, as well as to train personnel. No one who has followed at all closely the development of Schneider machines and engines during the last few years can fail to realise how great is the leeway which France has had to make up, and it must have required an uncommon degree of courage and determination to decide to enter once more into the struggle for the "Blue Riband" of the air. The gap in practical experience resulting from France's non-participation for a number of years is one which is not easily bridged, and if France succeeds in winning the contest, or even in putting up a fairly good showing, it will reflect the very greatest credit on the French aircraft industry.

We ourselves have no cause to be over-complacent. It is true, of course, that no matter what is the quality of the machines which France and Italy may put up against us, her pilots will, as we have said, have but little experience of the course. That is naturally something very much in our favour. But there is plenty of room still for mishaps which may reduce that advantage to vanishing point. We have some very fine machines, certainly. And we have some wonderful engines. That no one will deny. Our pilots have proved themselves at least the equals of any in the world. But, in spite of all this, the margin between safety and mishap is a very narrow one in modern Schneider machines. More than once during the last few weeks disasters have been averted by a hair's breadth, solely as a result of superb piloting. The most trivial cause may have the most serious consequences. A little bit of a wake from a steamer, a small piece of driftwood in the water, a temporary gleam of sunlight on the sea or on some piece of bright metal, and the result may prove disastrous. Truly no man can say what may happen between now and the afternoon of September 12.

In one respect this year's Schneider contest is far more difficult than has been any of the previous. For the first time in the history of the contest the machines do their preliminary trials immediately before starting to fly the course. This means that for the first time they will be called upon to alight with a far greater load of petrol on board than they have ever before had to carry. Not only have the engine powers increased, demanding a greater quantity of fuel and oil for the actual contest, but the initial take-off, followed by an alighting and a taxiing test of two minutes' duration, will consume still more fuel. All this spells added opportunities for mishaps.

Not since the 1925 contest at Baltimore have three nations competed for the Trophy, and should the fates be kind and France, Italy and Great Britain take part on September 12, it will be a spectacle the like of which has never been seen. The actual impression of speed which the spectator gets in watching the machines fly past is disappointing. At some 6 miles per minute one would expect the impression of speed to be almost terrifying. It is not. The sound of the engines is more convincing, and conveys a far stronger impression. But the take-off and taxiing tests, which, unfortunately, will be the most difficult

to watch, may be relied upon to provide all the thrills which the actual flying lacks. Not until the day of the contest can one know where in the area set aside for them the preliminary tests will take place. That they will be held as near to the western turning point as weather conditions permit may be taken for granted, since the rules permit the two minutes' taxiing to be carried out as part of the take-off for the start, and pilots will wish to waste as little time and petrol as possible before getting on their course. This means that if it is at all possible the machines will do their take-off near the western turning point, and will then head towards Ryde Pier, where the actual starting point is. But the weather may prevent this being done, in which case spectators on shore may see little or nothing of the machines until they enter the course at Ryde.

But whatever the wind condition, September 12 will, unless the contest be postponed, afford thousands of people an opportunity to see for themselves to what extraordinary stage of development have been brought modern high-speed aircraft and modern high-power engines, as well as the amazing skill of present day pilots.



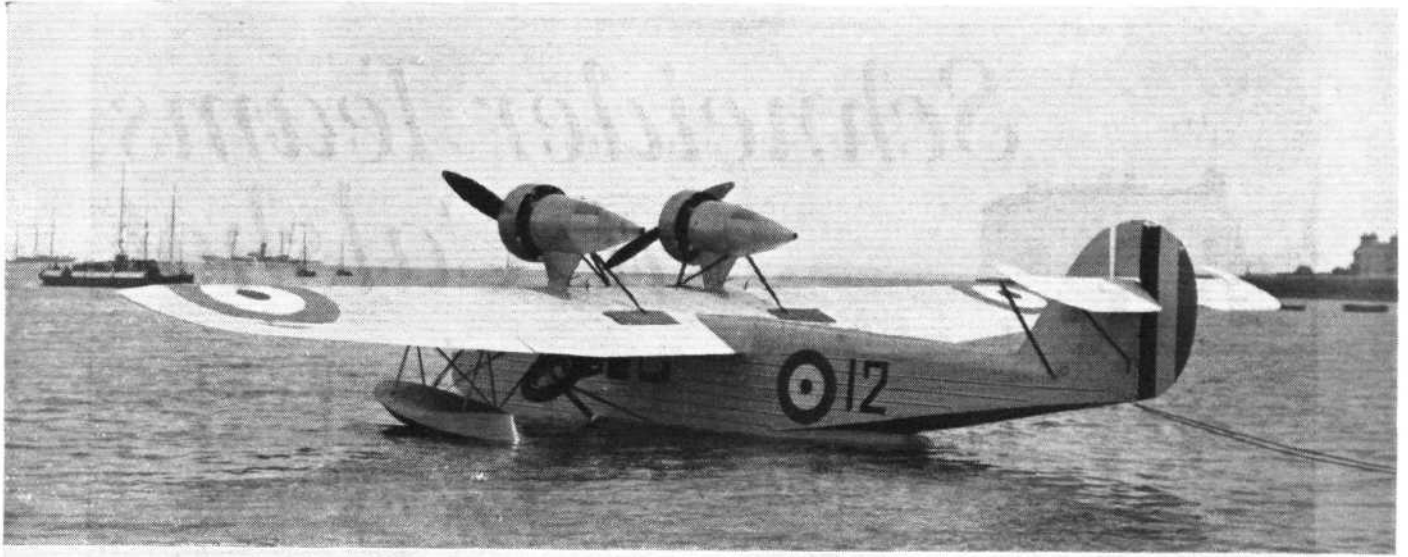
The welcome announcement is made that the air mails to India are to be speeded up this winter. The experimental service, which is to begin during October, is not, as far as can be gathered, taking into account the production of faster aircraft, but is based upon a changing of the route. When the new mailplanes now being built go into service, the mails will receive a still further acceleration, but in the meantime, the air mails to India will make the journey in one day less than they now take.

The new route, which is expected to shorten the time by one day, will be made possible by the progress of the construction of the port at Haifa. The mails will travel as they do now to Athens, but from Athens, instead of going via Crete to Alexandria, the mails will be sent by flying boat over the shorter route via Cyprus to Haifa, and thence onward by landplanes to Karachi, where, having left London on the Saturday, the mails will arrive on the following Friday.

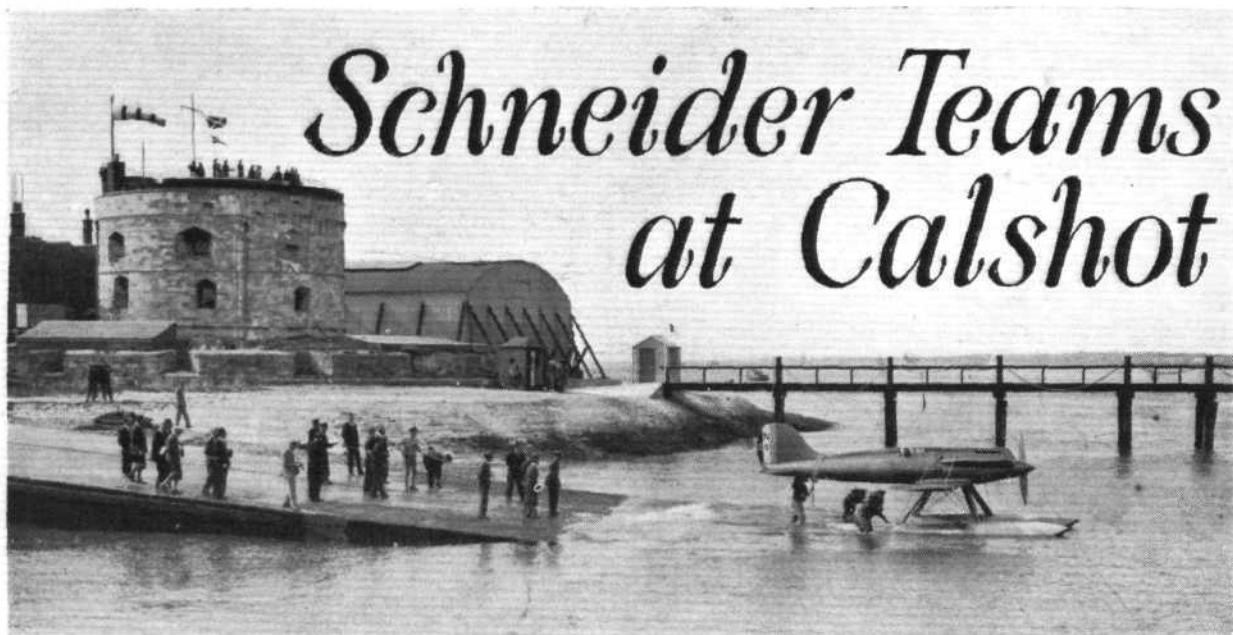
Another change, which does not necessarily affect the Indian mails, will be the inauguration of a mid-week "sailing" of the African air mails. Instead of travelling with the Saturday's Indian mails as they do now, the African mails will leave Croydon on Wednesdays, and will follow the Athens—Alexandria route. The present link of the air route between Palestine and Egypt is to be retained, and it is conceivable that if this service is carefully timed there may still be a slight speeding-up of the Indian mails by sending them by the Wednesday's machine, and of the African mails by sending them by the Saturday's, the switching over being done via the Palestine—Egypt section.

The new plans are to be welcomed if they result in a really valuable acceleration of the air mails, but faster machines and greater use of night-flying are still the two essential features of an air mail if it is to afford the maximum of service.





THE LATEST SARO "CLOUD": Three views of the machine on the water. The engines are Armstrong-Siddeley "Double Mongoose," and the estimated performance of the machine has been considerably exceeded.



Schneider Teams at Calshot

By

MAJOR F. A. de V. ROBERTSON, V.D.

CALSHOT, Monday, August 31.—For the last four days no flying has been possible at Calshot except in practice biplanes. The relief, therefore, was general when this morning Mr. Jackson, the local meteorological wizard, proclaimed that in all probability conditions would become possible for racing monoplanes before many hours had passed. And so it proved. It usually does when Mr. Jackson says it will. It was not really a nice morning. Clouds were rather low and the water was a bit choppy. So two biplanes went up first. Stainforth went round the course in a Fairey "Firefly" seaplane, and Boothman and Long went in the Fairey two-seater "Fleetwing." I am not sure if this "Fleetwing" is the only machine of its type in existence, but I think it is. In general appearance it recalls the "Fox."

The pilots who were flying round the course got quite a shock when over the shore at West Wittering. Some sporting young gentlemen had selected this spot to fly kites, and one at least had got his kite up to quite 300 ft. It must have been a pretty hefty kite, and it would not

have been in the least amusing to fly into its string. Wing Com. Huskisson was informed and promptly got busy. A kite is an aircraft and comes under the Air Navigation Act. I think the Chief Constable of Hampshire was invoked. The "danger area," shown on the map published in *FLIGHT* last week, became effective on August 24, but I am not sure if the whole force of the law can be put into motion. I believe that the kite-flyers will not have their licences endorsed, but I think it is unlikely that they will again choose West Wittering for their amusement until after the Schneider contest is over.

The orange coloured pylon was erected on the shore at West Wittering a few days ago, and to-day a destroyer carrying another pylon was anchored in position at Ryde Middle. From Calshot it was discernible through the mist with the aid of strong binoculars.

In the afternoon the sea calmed enough for racers to go out, and the Supermarine Napier S.5, N.219, was launched with Boothman in the cockpit. But the wash of a passing steamer churned up the water, and when it

had subsided, the conditions were less favourable, so the machine was hauled back up the slipway. About 3.30 the conditions improved again and Boothman got in a flight of about a quarter of an hour. It was a very pretty flight to watch, and I was surprised by the suddenness with which Boothman threw his machine into a vertical bank. It looked almost like the half of a flick roll, and recalled Guazzetti at Venice. But what was more surprising was that Boothman kept his machine from shooting up sideways, as the Italian machines used to do in 1927. He flattened out with equal suddenness, displaying a complete mastery of his machine. His landing was also as correct as could possibly be desired.

An hour later Long made a flight in the same S.5. Long's flying always inspires confidence, but his banking was less sensational than that of Boothman. The racing machines did not attempt to go round the course on account of the bad visibility over the Isle of Wight. The other S.5, N.220, the Venice winner, was out on the tarmac, and Flt. Lt. Dry,



TRAINING: One of the 1927 Supermarine-Napier S. 5 machines, N.219, going off on a practice flight. (FLIGHT Photo.)



FUELLING: This view of one of the new Supermarine Rolls-Royce S.6B machines gives a very good idea of the clean lines and small frontal area. Large quantities of petrol are carried in the floats, more in one than in the other, in order to counteract the propeller torque. (FLIGHT Photo.)

the engineer officer of the High-Speed Flight, got into the cockpit and ran up the Napier. The cowling was off the engine. Nothing was seen of the S.6 machines or of the Gloster Napiers.

To-day rumours have been current at Calshot that a train with the Italian machines in cases would arrive at Zeebrugge to-day and be brought across to Harwich by train ferry to-night. Strenuous efforts were made to obtain confirmation of this rumour, but nothing definite could be learnt.

Tuesday, September 1.—To-day the weather was unfavourable, and no flying took place. Bad visibility alternated with rough water.

The S.6 "A" seaplane N.248, the machine flown by Atcherley in 1929 and crashed a while ago by Hope, was brought back to-day from Woolston to Calshot, and was moored out on her pontoon. One of the "B" machines, S.1956, was also taken out on a pontoon in readiness in case the weather should improve, but the hope was vain. We consoled ourselves by watching "Southamptons" flying round.

Nothing Italian has arrived to-day, but we hope for the train-load of cases to reach Totton station to-morrow.

It is now confidently expected that the French team will come for the race. In respect to the French participation, it is of interest to note that the Paris correspondent of the *Daily Telegraph* reported on September 1 that: "To-day an important step was taken in France's preparations for the Schneider Trophy contest. M. Sadi Lecoq, her greatest high-speed pilot, who will represent his country in the contest next week, made two flights in the Nieuport-Hispano 'plane which he has been tuning up for several weeks at Hourtin, near Bordeaux."

"The first flight was made at 7 a.m. and lasted for five minutes. At 3 p.m. Lecoq took the air again with a full load and flew for ten minutes."

"He was delighted with these trials, and intends to press the 'plane to the limits of its speed possibilities without delay, possibly to-day. Experts who watched

the two flights were greatly impressed by the masterly handling of the machine."

"The question that now remains to be settled is whether the Bernard-Hispano machine at present at Berre, near Marseilles, should be sent to England."

Wednesday, September 2.—At 7 a.m. the weather seemed promising, and Orlebar ordered out two S.6 seaplanes, one Gloster 6, and one S.5, but heavy persistent rain returned before they could be got out ready, and all thoughts of flying had to be abandoned.

Schneider Items

THE Royal Aero Club has received the following donations towards the organisation expenses: Portsmouth Corporation, £2,000; Rolls Royce, Ltd., £750; Supermarine Aviation Works (Vickers), Ltd., £750; The White Star Line, £525; Solent Properties, Ltd., Lee-on-Solent, £150; Accles & Pollock, Ltd., £50; James Booth & Co., 1915, Ltd., £25; Lodge Plugs, Ltd., £25; Shell Mex, Ltd., £21; Noel van Raalte, £15; S. L. Courtauld, £10; High Duty Alloys, Ltd., £6 6s.; Lieut.-Col. Sir John Humphrey, £5 5s.; Hoffmann Manufacturing Co., £5 5s.; John Hall & Sons (Bristol and London), Ltd., £5 5s.; Sir John Shelley-Rolls, £5; Thomas Firth & John Brown, Ltd., £3 3s.

The huge crowds that are expected to watch the contest for the Schneider Trophy on Sept. 12 will be kept informed of the progress of the racing by means of loud speakers supplied and operated by Standard Telephones & Cables, Ltd. A running description will be broadcast from Ryde Pier through Daventry Radio Station. This will be picked up by wireless receivers at various vantage points around the course and then relayed to the crowds through loud speakers.

Fishermen on August 28 recovered from Lake Garda the body of Captain Monti, who fell with his seaplane into the lake on August 2 while engaged in a test flight for the Schneider Trophy contest.



PRIVATE FLYING AND CLUB NEWS

DUNLOP CUP TOUR OF FRANCE

UNDER a threatening sky and poor visibility, 26 light tourist planes—a list of which, in the order in which they took-off on all sections of the Tour, is given in the accompanying table—faced the starting line on Sunday, August 23 last at the Orly Airport (Paris Suburb), for the Tour of France, organised by the Dunlop Tyre Co., in competition for the Cup offered by them. The entries were limited to French owners of planes or pilots and to planes constructed in France. An exception was made, however, in regard to motors and foreign engines were allowed.

In accordance with the regulations established by the Contest Committee of the Aero Club of France, the following classes of machines were eligible to compete:—(1) Two-seater planes equipped with motors having a maximum of 100 h.p.; (2) three-seater planes with engines having a maximum of 120 h.p.; (3) two-seater amphibian planes having a maximum of 120 h.p.

No amphibian planes were entered, but practically all the light French tourist planes took part in the Tour. Some of the latest ones, such as the Blériot Guillemen, however, cancelled their entries at the last moment, as they were not quite ready.

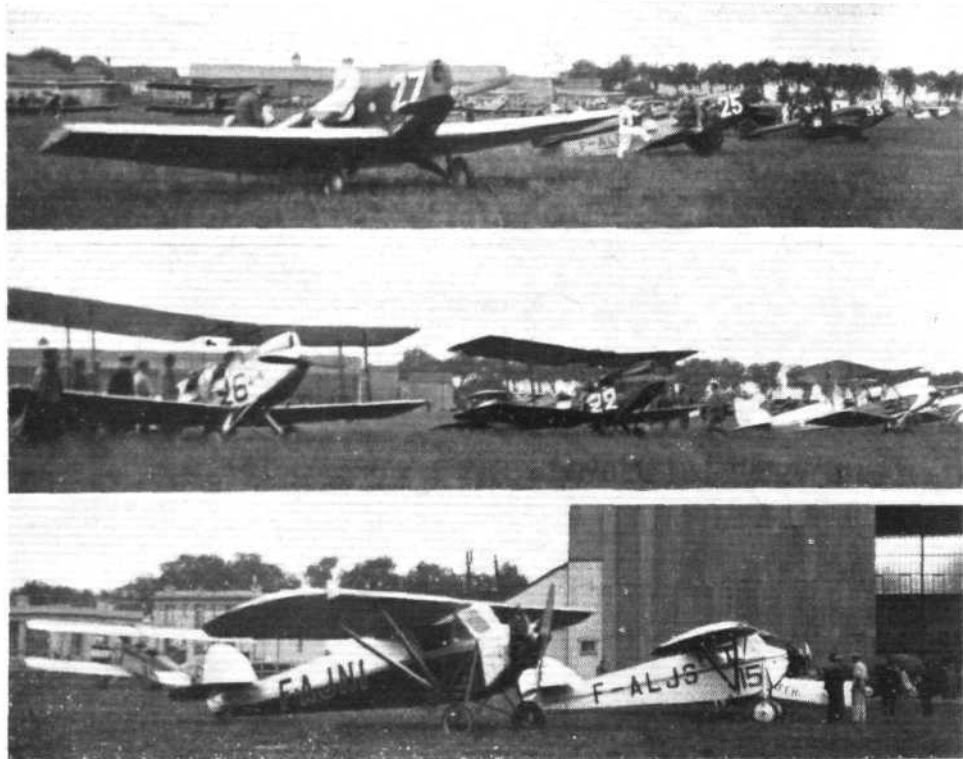
The Circuit to be flown in the Tour, of approximately 2,828 km., included a number of leading watering places and summer resorts. The morning and afternoon stages each day were as follow:—

August 23.—Paris (Orly)-Montlucon (268 km.); Montlucon-Vichy (70 km.).

August 24.—Vichy-Lyons (by Paray-Le Mondial, Macon) (188 km.); Lyons-Nîmes (214 km.).

August 25.—Nîmes-Cannes (212 km.). Afternoon, rest.

August 26.—Cannes-Marseilles (142 km.); Marseilles-Carcassonne (249 km.).



WAITING FOR THE START: Three types of machines lined up for the Dunlop Cup. Top, Farman 231 (95 Renault); centre, Morane "Moth" (85 "Gipsy"); bottom, Potez 36 (95 Renault).

Machine	Engine	Pilot and Passenger
Farman 231 ..	Renault 95 ..	de Clermont Tonnerre and Freton
Farman 231 ..	Renault 95 ..	Nouvel and Berlichon
Farman 231 ..	Renault 95 ..	Petit
Farman 234 ..	Salmson 95 ..	J. Puget and Lt. Lecarme
Farman 234 ..	Salmson 95 ..	Arnoux and Brabant
Caudron 193 ..	Renault 95 ..	Palayret and Paquier
Farman 202 ..	Salmson 120 ..	Letartre and F. Thomas
Guerchais T12 ..	Renault 95 ..	Massot
Moth Morane ..	Gipsy 85 ..	Bajac and Roques
Moth Morane ..	Gipsy 85 ..	Hermann and Signeria
Moth Morane ..	Gipsy 85 ..	J. André and de Boigne
Moth Morane ..	Gipsy 85 ..	Meccas and Charmeaux
Moth Morane ..	Gipsy 85 ..	P. L. Richard and de Marolles
Moth Morane ..	Gipsy 85 ..	Lebeau and Forestier
Moth Morane ..	Gipsy 85 ..	de Bimard and Geo Ham.
Moth Morane ..	Gipsy 85 ..	de Rouvre and Dary
Moth Morane ..	Gipsy 85 ..	de Montigny and Boudineau
Potez 36 ..	Salmson 95 ..	Marzin
Potez 36 ..	Salmson 95 ..	Blairon and Martinoff
Potez 36 ..	Salmson 95 ..	Claude and Leon
Potez 36 ..	Salmson 95 ..	Dr. Crochet
Caudron Luciole 270 ..	—	Brevier and d'Ahetze
Potez 36 ..	Renault 95 ..	Cendre and Laporte
Potez 36 ..	Renault 95 ..	G. Fougère and J. Thomas
Potez 36 ..	Renault 95 ..	de Montecler
Potez 36 ..	Renault 95 ..	Pagulu and Fransisquet



Henry Massot standing in front of his Guerchais T 12 (95 Renault) monoplane. He won the "Pilotes Civils" Tour of France last April.

August 27. — Carcassonne-Pau (219 km.); Pau-Biarritz (92 km.).

August 28.—Biarritz-Rochefort (276 km.); Rochefort-La Baule (Escoublac) (184 km.).

August 29.—La Baule (Escoublac)-Angers (137 km.); Angers-Deauville (212 km.). Afternoon, rest.

August 30.—Deauville-Le Touquet (Berck) (by Tancarville-Ault) (167 km.); Le Touquet (Berck)-Paris (Orly) (198 km.).

The primary object of the Dunlop Cup Tour was to encourage a regularity of flight among tourist planes, and the classification of the competitors was made with this end in view. Each competitor was given a figure denoting the cruising speed that he was expected to maintain throughout

the Tour, and which varied according to the type of plane used.

This figure, represented by V , was calculated by the formula—

$$V = 0.75 V_0 - 4$$

in which V_0 represents the maximum ground speed of the "prototype" of the machine (the first plane of its type submitted to the Service Technique for approval) effected over the measured course of the Service Technique at Villacoublay. As the Dunlop Tour was flown at a higher altitude than these preliminary trials were made, a deduction of 4 km.-hr. was allowed from the maximum speed shown by the prototype, as represented by V_0 in the formula.

The competitor was then expected to maintain an average cruising speed which represented 75 per cent. of V_0 on each of the sections of the tour. If he exceeded this figure, he received a one-point premium for each km./hr. he made above it, the maximum allowance being 10 points for each section. If, on the other hand, however, the competitor failed to maintain this cruising speed, he was penalised one point for each km./hr. that he flew below it. Such deductions being made up to a maximum of 30 points for each section. Each competitor was allowed $5\frac{1}{2}$ hours to traverse a section of the Tour; if he took longer than this, he was disqualified. It can thus be seen

BROOKLANDS NOTES.—The sudden change in the weather accounted for 80 hr. instructional flying during the week, as against 35 hr. the preceding week. Two first solos were successfully launched and one "A" licence awarded.

Over 5,000 holiday makers attended the School's second Display at Clacton-on-Sea, and as usual the programme ran through without a hitch.

It has been decided to keep on the joy-riding machine at Clacton, as results have shown that it is an excellent method of interesting visitors and residents in flying. Many new pupils have joined the School direct from the Clacton Flying Ground.

During the week-end Capt. H. D. Davis tested out the new Klemm fitted with an inverted Hermes engine. The engine and machine both gave complete satisfaction, and over 80 passengers were carried in it in less than 3 hr. The machine has an exceptionally flat gliding angle, which does not appear to be affected by variations in load. The top speed on full load is 110 m.p.h. and cruising at 1,900 revs. 95 to 100 m.p.h.

The repair section of Brooklands Aviation, Ltd., continues to expand, and plans are already out for larger buildings. This Department is now turning out on an average four completely reconditioned machines per week. Mr. J. W. Massey, who originally started his civil career with Mr. A. E. Jones as a joy-ride mechanic in 1919, has been promoted to works manager.

Princess Ileana and her husband, the Archduke Anton of Hapsburg, visited the School on Thursday. The Archduke was one of Mr. Davis's first pupils at Brooklands in the early days of the School, and has now flown over 700 hr. without any trouble.

It has been decided to postpone the reunion dinner to pioneer pilots of Brooklands until after the flying season.

that accurate navigation and a good cruising speed were essential factors for pilots to be well placed in the Tour.

A climb to 2,500 metres was also required of each contestant during one of the sections of the Tour. The particular section was designated by one of the Commissaires in charge, and an additional 10 minutes was allowed in which to make the climb. A failure to do so resulted in a penalisation of 30 negative points.

Other penalisations consisted of five negative points for a change of a tail skid or a damaged wheel (a tyre could, however, be replaced without penalty); 10 negative points for a change of an airscrew, unless a spare one was carried aboard the plane; 20 negative points for the opening of the motor housing or cylinders, which were sealed with cords before starting.

Several well-known pilots took part in the Tour. Robert Bajac, the chief pilot of the Air Union Co., is expected to take over the Morane "Moth" of Louis Roques at Marseilles and fly it to Paris, with Mrs. Bajac as the passenger. Henry Massot is piloting his Guerchais monoplane in which he won the Tour of France organised by the "Pilotes Civils" last April. Paul Louis Richard, of the Aeropostale Company, is also entered in the Tour, and is flying a Morane "Moth." The greater part of the planes are, however, piloted by their air tourist owners. We hope to publish the results of this Tour next week.

A recent visit to the aerodrome disclosed the fact that the new buildings which are to form the headquarters of the Brooklands Aero Club are proceeding apace. These are being erected under supervision of Airwork, Ltd., and embody several improvements which that firm has found to be desirable since they built their own place at Heston.

When finished there will be exceptionally fine accommodation for the club members and for all visiting pilots. The restaurant will be large and well furnished, as will the lounge and bar.

This building will make the Brooklands Club one of the most modern and well appointed flying clubs in the country. When one comes to consider the matter, it is really only right that Brooklands should continue to be a flourishing club, for, from the earliest days of flying it has been the cradle of many pilots who have afterwards become leading lights in the aeronautical world. The thanks of all concerned with the welfare of flying are therefore due to Dame Ethel Locke-King for the interest she takes in the well-being and encouragement of the Club.

CINQUE PORTS FLYING CLUB.—Even worse weather prevailed during the week ending August 23 than has yet been experienced this summer (?), and in consequence flying time was reduced to 10 hr. 10 min. In the last week's report reference was made to Miss Aitken, one of the lady private owner members, and the hope was expressed that she had won the Ladies' Cup at the St. Hubert Rally; this has proved to be the case, and, in addition, she has won the Challenge Cup, to be held by the Club for 12 months; this is an extremely meritorious performance and the Club offers her its sincere congratulations.

On Friday, Mr. H. R. Law appeared with his resurrected "Widgeon" on his way to Le Touquet. It will be



NEW SWEDISH LIGHT PLANE: The "Viking," designed and built by Svenska Jernvägsverkstäderna of Linköping, was exhibited at Stockholm, and was described in our issue of May 29, 1931. The machine is fitted with a Cirrus-Hermes II B inverted engine, and is a three-seater capable of being converted into a twin-float seaplane. It can also be fitted with skis for use on snow.

remembered that he damaged this machine in a forced landing in the King's Cup Race. The Club was represented at the Rally at Le Zoute (Belgium) by Com. Gubbins, R.N., and Mr. K. H. F. Waller; we understand that they were, in fact, the only British representatives at the Rally.

The bomb-dropping competition on Sunday attracted a field of six and resulted in a win for Mr. Temple Harris, of Faversham, whose nearest bomb dropped 21 yds. from the mark. Subsequently, an attempt by a club official resulted in 9 yds. being registered. This, however, was not competitive.

THE FLYING MEETING FOR AIRWOMEN.—The Ladies' Flying Meeting which is to be held at Sywell on Saturday, September 19, is receiving great support and encouragement from every side. The Duchess of Bedford has very kindly promised to open the meeting, while among the well-known airwomen who have already promised to help are:—The Hon. Mrs. Victor Bruce, the Hon. Lady Bailey, Miss Winifred Brown, Mrs. Cleaver, Miss Pauline Gower, Miss Grace Aitkin, Miss Joan Page, and Mrs. Patterson. It is hoped that both Miss Amy Johnson and Miss Winifred Spooner may be back in England before the meeting. As there has never been a flying meeting for lady pilots anywhere before, it has been decided to invite some of the foreign airwomen, and invitations have therefore been sent to all the European Aero Clubs and to America. Nearly every type of light aeroplane will be flown and demonstrated by women pilots, and aerobatic displays will be given in both the "Moth" and "Avian." Among the many events, there will be a Ladies' Race, and also a parachute descent by a lady pilot. A "Domestic Race" is being organised for the male pilots. All husbands who have found difficulty in getting their wives' approval to their flying should bring them to this meeting—lasting conversions are guaranteed.

An Arrival Competition has been arranged in connection with this meeting. The arrival time is from 12—12.30 hr., and there will be a prize for the lady pilot who lands nearest to the time of the sealed zero hour. In the event of a tie, the competitor who comes from the longest distance will be awarded the prize.

PETERBOROUGH FLYING MEETING.—The Northamptonshire Aero Club held their second annual Flying Meeting at the Horsey Toll Aerodrome, Peterborough, on Saturday, August 22.

The thanks of the club are due to Mr. K. Whittome for the loan of his private aerodrome, and also to the Clerk of the Weather for the gift of one fine, sunny day.

A very attractive flying programme had been arranged. The usual parade of aircraft was followed by an exhibition of aerobatics and inverted flying by Flt.-Lt. Moir and Flt.-Lt. Lascelles, both of the Central Flying School, Wittering. This display was really wonderful, especially when one remembers that it was done in borrowed Moths, and that one of these possessed no harness.

THE "BROLLY ROOM": All the pupils at Air Service Training School at Hamble have to wear parachutes of the Irving type, and the view here shows the room where the wearers are instructed in the care and packing of their parachutes. The table in the foreground is for laying out the parachutes before packing into the container. At the back the chutes are hanging up to ensure that they are thoroughly dried before being packed. The room is kept at a certain steady temperature while being well aired.

(Flight Photo.)



Mr. Lissant Beardmore, using the same glider in which he crossed the Channel, was towed into the air by an Avro, and slowly glided back to earth. He was also towed off by a car. This was the first time aero-towed gliding had been seen in Peterborough, and the spectators were much thrilled.

A race of three laps of the aerodrome, between the well-known local Speedway Champion—Mr. H. A. Knighton—and a Moth piloted by Flt.-Lt. Lascelles, ended in victory for the aeroplane, after an exciting struggle.

"Hell-Fire Tomk," who distinguished himself at Sywell on Whit Monday, again showed his wonderful ability with the revolver, destroying five captive balloons in six shots, while travelling in a fast-moving plane!

After demonstrating the Klemm monoplane's low-speed flying, Mr. Palmer gave one of his always delightful aerobatic displays in a Moth.

The race for the Horsey Toll Challenge Cup, open to Sywell private owners, was won by Mr. K. Whittome. The final event was the bombing of a rebel fort, manned by queer-looking gentlemen dressed in still queerer-looking Eastern kit!

A very delightful dinner and dance at the Haycock, Wansford, ended a pleasant, and for once, rainless day.

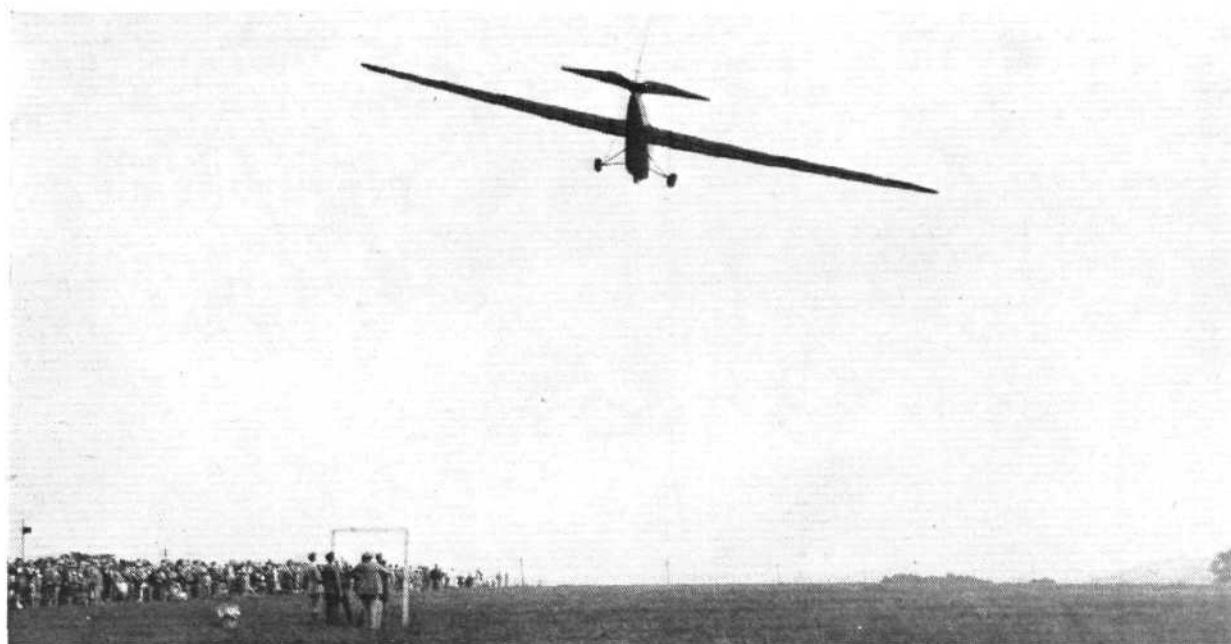
Among the visitors by air were:—"Moths": Miss Tyzack, Messrs. Bowles, Watson, Muntz, Wilson, Christian, Ashwell-Cooke, Danson, Hudson, G. Linnell, J. Linnell, Palmer. "Spartan": Lt.-Col. Strange. "Klemms": Lord Willoughby de Broke and Capt. D. Davis. "Avians": Messrs. Brett and Surtees. "Redwing": Flt.-Lt. Russell. "Bluebirds": Messrs. Clayton and Parker. "Avro": Mr. Phillips.

A PAGEANT AT MANCHESTER.—Northern Air Lines are holding a pageant at Barton on Saturday, September 19. A very important gathering is expected, as the L.M.S. and local bus companies are running special services, and the full backing of the Corporation has been obtained.

In view of this a very big attendance is expected, and from our knowledge of the way pageants are run by Northern Air Lines we can say that those who attend will not be disappointed.

LONDON GENERAL OMNIBUS Company Sports Association Flying Club.—The formal opening of this Club will take place at Broxbourne Aerodrome on September 17, and a full programme of flying has been arranged for the occasion. The Club has been formed as a subsidiary to the L.G.O.C. Sports Association, in order that its members may avail themselves of the unique opportunity of flying at a very moderate cost. Naturally, in order to ensure that such a venture is a success, it is necessary to enrol many hundreds of members, and in this respect the Club has been fortunate in obtaining approximately 1,500 names. Thanks are due to the Redwing Aircraft Co., which firm has given great assistance in the formation of the Club.

GLIDING



THE "TERN": A new sailplane which has been designed and built by Airspeed, Ltd., of York. It is stressed for auto and aeroplane towing, the latter at 70 m.p.h. A detachable undercarriage is fitted for auto-towing.

LONDON GLIDING CLUB.—On Sunday, August 9, Mr. Desoutter passed his "A" test, and Mr. Lee, an *ab initio*, passed his "B" test. The week ending with the 16th inst. will be remembered by most people as a new standard of summer weather. On the first day of the camp, the wind was too high for training, and the Professor was launched, did the Zoo flight successfully, and landed at the top. The uselessness of trying to force a high efficiency machine down was shown by the pilot, who tried to and failed, although he flew at 70 m.p.h. in the attempt. The next flight, with a different pilot, ended at the bottom, due to a bad launch. At the third launch the take-off was excellent, and half a minute later the Professor departed up a cloud street towards Ivinghoe at a ground speed of about 4 m.p.h. The glider passed near the Beacon, and then turned to the west, reaching its maximum height over flat ground beyond Edlesborough after a continuous climb. It then lost height and returned to Tottenhamhoe, rapidly climbed to some 600 ft. over the hill, and then on with the help of a cloud, and departed incontinent past Dunstable and Luton, to land in Luton Hoo Park by the lake, which is $6\frac{1}{4}$ miles away over flat country.

On Tuesday, the weather was moderate, but five 45-sec. flights were made towards the "B" test.

On Thursday evening, after two days of southerly gales and rain storms, the wind moderated and veered to the west, and Mr. Dent, an *ab initio*, did a "C" test.

On Friday, there was a strong and bumpy west wind. The Prüfling took off first, and made four soaring flights and five very prolonged glides during the day. The Professor did a soaring flight in which six short excursions from the hill were made, purposely identical except that in one of them it gained height away from the hill, due, presumably, to a thermal up-current. In the evening, the wind lessened. Mr. Whidborne did an "A" test, and Messrs. Cornell, Spencer and Palmer passed the "B" test. The last two had joined the club ready to take their "B's," and had suffered nearly a week of bad weather.

On Saturday, Mr. Batchelor did a nice 45-sec. flight, and Mr. Grant did an excellent flight for his "A" of 40 sec. duration. Late in the evening, Mr. Gamboa, who is a Peruvian pilot of experience, did a good "A" test. A Saturday party erected and flew the two-seater, and Mr. Michelson flew his Phantom from the top.

The score for the camp was three "A," three "B," and one "C" test.

There is room in the beginners' and in the intermediate

group for new members, and anyone who is really keen will be welcome. Will all those interested please get in touch with the Sec., London Gliding Club, 35, Milk Street, London, E.C.2. Telephone: National 8682.

FIRST BRITISH OFFICIAL DISTANCE FLIGHT in a Sailplane.—What is claimed to be the first British Official Distance Flight was performed on an all-British sailplane, "The Tern," a product of Airspeed, Ltd., York, on Monday, August 17. The distance covered was 8.3 miles from a point at Stoop Browe, Ravenscar, to a point on Scarborough North Beach. Although other distance flights have been made on a sailplane in this country, *i.e.*, Herr Kronfeld from Lewes to Portsmouth (70 miles) and F/O Buxton from Dunstable to Luton Hoo Park (16 miles), "The Tern's" flight is the first British Official Distance Record to be recognised by the British Gliding Association. It is expected that this record will be broken in the very near future, as this flight has stimulated keen rivalry among the British sailplane pilots.

A LIVE JOURNAL.—A new handbook of the British Gliding Association has just been issued, and upholds the spirit with which the Gliding Association has been run since its inception. In it will be found information on everything appertaining to the British Gliding Association's activities as the governing body of the sport, and also a wealth of material which will interest everyone who is connected with a gliding club.

Not only are all the rules and regulations with regard to airworthiness, competitions and the B.G.A. itself clearly and concisely laid out, but there are also many articles of a general nature which will be invaluable to gliding club secretaries who have the welfare of their clubs at heart. In the main body of the journal is an undated diary with ample space for notes, and also a log, which may be used as a record of glides. A particularly interesting section is devoted to the weather map, cloud formations and other aspects of meteorology which affect those who glide. These are simply explained and illustrated with some excellent photographs.

GLIDING AT PORTSMOUTH.—The Portsmouth Gliding Club held, in conjunction with Lyons Tea Department, an excellent gliding meeting on Portsdown Hill last Sunday, August 30. The wind, with that vagrant habit so characteristic of it in this country, went round to the E.N.E. as soon as the meeting was certain to be held, and this is the worst position of any for gliding on that

hill. However, the best was made of a bad job, and a very good best it was. The gliding had to be carried out down the north slope of the hill, which is comparatively gentle, and thus does not create much in the way of up-currents, while the landings had to be made among bushes, stones, trees, and many other forms of obstruction. The best flights were made by F/O Mole in a "Scud." He was shot up far higher than the other machines owing to his light weight, and the way in which he pulled his glider up at just the right moment. Utilising his flat gliding angle, he was able to carry on a long way out over the almost flat country, to land in fields the other side of the obstructions, which worried most competitors. The handiness of the "Scud" was shown up well here, because there was no need for more than four men to go down to bring it back. The handholes on the sides are excellent for the purpose, and no difficulty was experienced in bringing the machine back up the hill again.

Other excellent glides were those made by Mr. Leroy Brown in a glider which he has designed and made himself. Mr. Brown is the power behind the Southdown Sky-sailing Club, and others of his members also made good flights in this machine.

The wind conditions were, in a way, better for the primary gliders than for soaring proper, and several local members made extended flights in their "Zögling," which carried them right down among the bushes.

Herr Krause, with the Lyons Tea "Falke," made an attempt to soar, but on each occasion was forced to land a long way from his start. The interest roused in the Portsmouth district was large, for the crowd numbered several thousand. The management had also engaged a parachutist to make a drop, and no doubt this accounted to a certain extent for the number of spectators; they were, however, very interested in the gliding, and we hope that the Club will benefit accordingly.



AT THE WASSERKUPPE: The "Kassel 25" just before landing on the southern slope of the Wasserkuppe. This type will shortly be put into production.



A Confirmed Caterpillar

THE noted American pilot, Major "Jimmy" Doolittle, who is head of the aviation department of the Shell Petroleum Corporation in America, recently made his third jump for life whilst testing a new plane equipped with a 512 h.p. "Wasp" engine, which had been constructed for the purpose of attempting a new world's land-plane record. Doolittle's laconic remark upon his escape was "Aeroplane failed, Chute worked." Each of his jumps was made with an Irvin Air Chute.

French Air Council Created

On August 27 M. Doumer, President of the French Republic, signed a decree constituting a Higher Air Council, to be an *advisory* body on all subjects relevant to military aviation. From this to the creation of a *governing* Air Council is probably a small step. The French Air Minister is *ex-officio* president of the new Air Council, the members of which are the Minister for Air, the Inspector-General of the French Air Force, the Chief of the Air Staff, the Director of Technical Services, and chief officers of the French Air Force.

Italian Air Manœuvres

No less than 900 aircraft are reported to have taken part in Italy's air manœuvres held during the period August 27-31. The view is expressed that, on the whole, the attacking forces must be regarded as having been extremely successful, while "A" force, the defenders, were in most cases outmanœuvred and outfought, and, in the end, had to ask for an "armistice." Apparently Italy went a good deal farther than we do in this country in introducing real war conditions. For instance, during the

attack on Spezia at night, all the electric light was cut off and motor cars were not permitted to show any lights. "Darkness and composure" seem to have been the watchwords. One wonders how much of the overwhelming superiority of the attacking forces was carefully engineered in order to prepare for an increased Air Estimate in the next Budget.

France also Manœuvres

THE French air manœuvres, held in the Nancy district, and mainly consisting in air attacks upon that city, took place at the same time as the Italian air manœuvres, and as in Italy so also in France the attackers seem to have been more successful than the defenders. The "lesson" which French air opinion draws from the manœuvres is that in anti-aircraft defence an extensive system of ground organisation, with listening posts, lines of communication, searchlights and guns, is absolutely essential if the attacking air forces are to be dealt with effectively. The "lessons" might have been much more realistic if France and Italy could have gone to war (in a friendly way, of course), French machines attacking Italy and Italian machines attacking France. The idea is not, perhaps, as mad as it sounds, and we present it to our good friends in France and Italy free gratis and for nothing!

Change of Address

WE are informed that Palmer Tyres, Ltd.—the makers of the well-known Aero wheels, tyres and brakes—have moved their Head Office to Aldwych House, Aldwych, W.C.2. The 'phone number is now—Holborn 8461 (8 lines).

AIRPORT NEWS

CROYDON



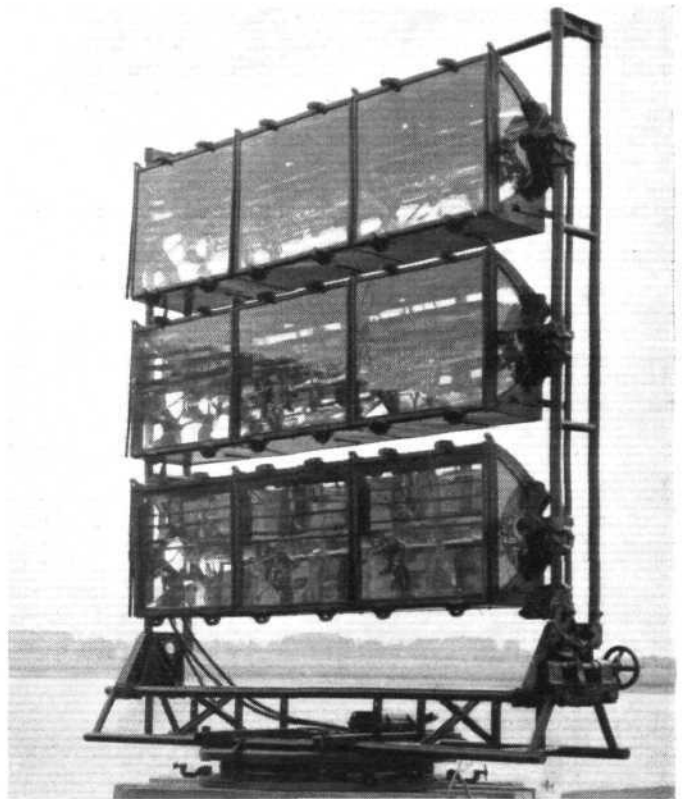
CROYDON BY FLOODLIGHT: An excellent view of the airport lit up by the new floodlight produced by the General Electric Co.—which was one of the apparatus demonstrated at Croydon on September 2.

WE have just concluded a week of really passable weather. It almost succeeded in reminding us that there is a summer in this country, although it is a hard job to convince our foreign visitors of the fact.

We had two rather exciting occurrences to relieve the monotony of things this week, and they both happened on Thursday. The incoming early morning freight "Goliath," belonging to Air Union, arrived over the aerodrome in a heavy mist, and, after circling for some time, proceeded to land, assisted by rockets. In so doing, the pilot overshot, and flattened out the fence on the north boundary, coming to a standstill with the whole bulk of the machine across Stafford Road. It caused a complete traffic block, as the length of the machine stretched from one pavement to the other. Fortunately, no one was hurt, and only the fabric on the underside of the bottom planes of the "Goliath" was ripped. It was a lucky escape for the occupants of the houses, as it came to rest about three yards from the front of them, and only one yard from a tramway trolley standard. The visibility at the time of the accident was only 100 yards, and surely the time has now arrived when aircraft pilots should not risk landings with such a short range of visibility. The public and property owners should certainly be protected from accidents such as these, especially when one remembers the fact that the visibility at Biggin Hill was six miles.

The second accident happened about lunch time. The machine was a Klemm, belonging to British Air Transport, Ltd. It was just taking off, with a cinema man, to secure some films of the aerodrome, when the engine cut out. The machine crashed and went through the fence on the east boundary, finishing up across Purley Way. Again luck intervened, and no traffic or pedestrians were on the spot, which is unusual for Purley Way, as it is normally an exceptionally busy thoroughfare. The machine in this case was badly damaged, but the occupants were only scratched.

On Monday, Mr. Montague was a passenger on the Imperial Airways 8 a.m. service from Paris, returning, no



THE G.E.C. FLOODLIGHT: A close-up of the light source used in the upper picture. It consists of nine 1000-Watt lamps, each set in a parabolic reflector.

doubt, in connection with the political crisis. Whatever political views one holds, it has to be admitted that Mr. Montague has been a worker in the cause of aviation.

One has heard of ships springing leaks, but never an aeroplane, until this week, when a certain air liner arrived with a bad leak. Several of the passengers had to travel nearly all the way with umbrellas up, as it was apparently as wet inside as out. It was due, I believe, to a fault in the emergency exit.

A wonderful light has been temporarily fixed for the illumination display this week. It consists of three rows of powerful reflectors, and it lights the aerodrome up as if it were daytime. Another special feature is an illuminated wind "T," which is lighted with alternate red

and green lights. This looks very effective. A visit to the aerodrome to see these lights is well worth while. Both are products of the General Electric Co., and the floodlight is illustrated on the previous page.

[We hope to describe these in detail, together with various other lighting devices, next week, when dealing with the special demonstration held at the airport on August 2 in connection with the International Illumination Congress.—ED.]

A considerable portion of the new side of the aerodrome has now been taken in, making the landing area now quite a great expanse.

The traffic figures for the week were:—Passengers, 1,538; freight, 85 tons.

HESTON AN AIR PORT

THE introduction of Customs facilities at Heston Airpark in March, 1930, has met with so favourable a response by owners of private aeroplanes that the arrangements now provided for the clearance of passengers and freight are to be permanent. The aerodrome will, therefore, be known in future as "Heston Airport."

There will thus be eight airports in all in England, viz.:—Croydon, Heston, Lympne (Kent), Barton (Manchester), Speke (Liverpool), Cardington, Dover, Woolston (Southampton). Of these, Liverpool is for passengers only, Cardington for airships, and Dover and Woolston for seaplanes.

By the end of May, Heston had actually handled more traffic than Lympne, being in this respect second only to Croydon, whose traffic Heston is designed to relieve. In all, 1,051 pilots have cleared Customs at Heston, and in a fine month the average figure is over one hundred.

By arrangement with the Automobile Association, all the necessary documents required for foreign aeroplane touring, together with the full series of special flying maps, prepared by them, are now available on demand at the Heston Airport, so that even distant flights can be undertaken by members of the Association with no more than a few minutes' preparation.

The passing of the "Air Park" spirit will be regretted by many, especially those who have always looked upon Heston in the light of an exceptionally cheerful club at which to learn flying. We hope that the Directors will, while fostering its growth, not let the Croydon atmosphere develop to too great an extent. Heston is, and should always be, the Customs clearing station for private owners and the smaller commercial people. While this traffic is its main business, a suitable atmosphere can be maintained, but once air lines under Government control are allowed to infect the place, the democratic spirit will be killed and a bureaucratic one substituted. That day, if it should ever be allowed to come, will sound the death knell of private flying from Heston.

The recent bad weather (or ought we to say the normal

weather) which has been our lot for the past innumerable weeks, has naturally done a great deal of harm to these whose living depends upon getting people to fly, and at Heston this has been particularly noticeable. A case in point was the first evening the Zeppelin arrived. That evening the weather cleared and people suddenly decided that they wanted to fly; the result was that between 5 p.m. and dusk over 14 hr. had been put in at Heston. The spell did not last long however, and during the past week-end those who preferred the warmth of their fireside far outnumbered those who braved the boisterousness of the aerodrome.

The new building improvements and extensions at Heston are going up rapidly, and even a cursory examination shows the forethought with which Messrs. Norman and Muntz originally laid out this part of their undertaking. All these improvements fit in to the original plan with ease, showing that they were anticipated when the first buildings were erected. The accommodation which will be available before long will really be exceptional. Everything is being extended and improved. The restaurant will be extended through the whole width of the existing building so that those having meals there will be able to see not only the aerodrome, but also the entrance to the air port. This entrance is also being improved; there will be flower beds in front of the club house and the vista between it and the new A.A. weather broadcasting station will be greatly improved. (We imagine that this station will be run automatically by a gramophone record which will chant monotonously "Further outlook in all districts, unsettled.") One of the most interesting developments will be the provision of bedrooms, each with its own bathroom. There is no doubt that these will be well patronised, for how often have we all wished that something of the sort was available in order to save a journey up to town after a somewhat trying flight in bad weather.

Such accommodation exemplifies the care which is taken in every way that it is possible to do at Heston to provide for those who fly.

Galway as an Airport

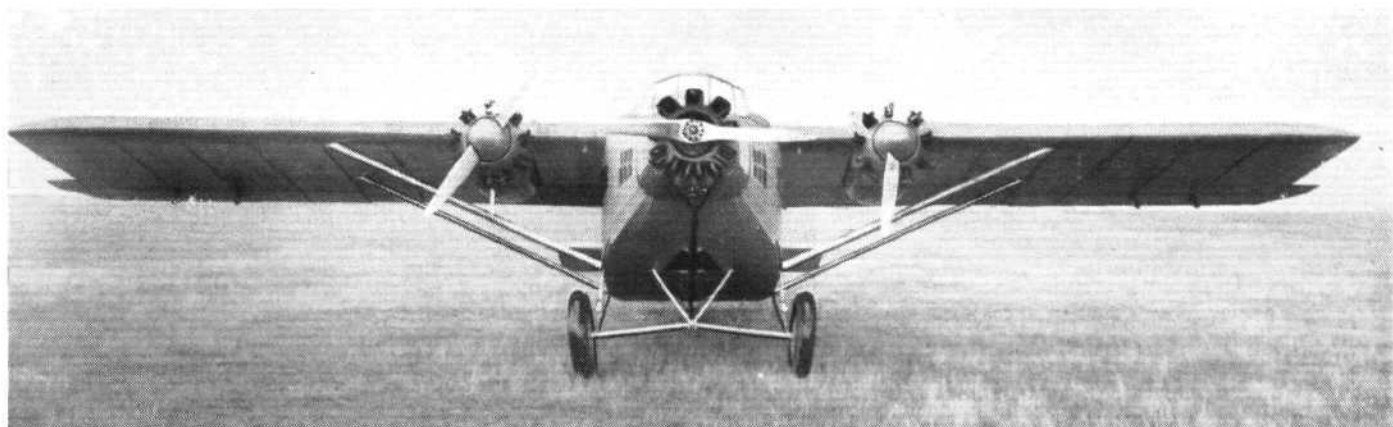
THE Galway Trans-Atlantic Co., Ltd., which was mentioned in these columns recently, appears to be energetically preparing for the establishment of an airport at Galway as an adjunct to its scheme for speeding up trans-Atlantic services. According to reports received in Dublin, Sir Alan Cobham is to visit Galway to survey the proposed site on his return from the African tour, but it cannot be ascertained if the proposal is to utilise the old military aerodrome at Oranmore, six miles east of the city. Sir John Purser Griffith, C.E., a well-known Irish engineer and member of the Free State Senate, is said to be interested in the scheme, and is to discuss the project with the Director of Civil Aviation in London at an early date. No definite information is available in Dublin, writes our representative, but it will be necessary for the operators to obtain the approval of the Minister for Industry and Commerce before the commencement of any service of aeroplanes in the Free State.

Signs for Airmen

PROGRESS is being made in the development of the scheme for a uniform air sign in this country, as an aid to air navigation, which has been advocated by the Civil Aviation Section of the London Chamber of Commerce. It will be remembered that a Memorandum prepared by the Automobile Association and approved by the Section was issued by the latter last June. The Section now learns that instructions have been given by the authorities

at Norwich for an air sign to be prepared for that city. It is understood that the sign is to be the full size recommended and laid out on the ground occupying a space of 278 feet in length. The original Memorandum on the subject stated that the sign should be of such a size that it can be read from a height of at least 2,000 feet and that it should be preceded by a recognised characteristic, viz., an arrow pointing true north with the letter N in the middle of the arrow, so that it can be distinguished from any other sign, such as an advertisement. Further, as the prevailing wind in England is from the south-west, these signs should be placed to the south-west of towns so as to run the least chance of being obscured by smoke. It is of interest that in the United States of America there are some 12,000 air signs erected, according to the specifications drawn up by an Air Marking Committee and recommended by the Department of Commerce for use throughout the U.S.A. It is hoped that other towns in this country will soon follow the lead of Norwich and adopt the standard signs recommended in the Memorandum sent out by the Civil Aviation Section of the London Chamber to a large number of local authorities and organisations throughout Great Britain. In the meantime it may be mentioned that the city of Leeds has the matter under consideration, whilst at Nottingham and Leamington the local Gas Companies have marked or are marking gas holders, a method suggested in the Memorandum as convenient in some localities, though additional to the national scheme.

AIR TRANSPORT



S.A.B.C.A. S.XI

DESIGNED and built by the *Société Anonyme Belge de Constructions Aéronautiques* at Haren, Brussels, the S.A.B.C.A. S.XI is the first large commercial aeroplane to be produced by the well-known Belgian company, and in fact the first large machine of original design to be built in Belgium. It will doubtless be recollected that several years ago the S.A.B.C.A. acquired the rights to build Handley Page biplanes under licence, and a number of these machines have been produced and have given very good service in Belgian Congo, where they have been in use for several years.

At the moment it is not known whether the S.XI is intended for the African air routes of the S.A.B.E.N.A., or whether the new machines will be used on the European lines operated by that firm, such as, for example, the London-Copenhagen route. It seems likely that the machines will first be tried out on the European routes and then, if found satisfactory, be transferred to the Belgian Congo lines, where the all-metal construction should stand the climate rather better than do wood constructed aircraft, although these have, as far as can be gathered, given excellent service.

The S.A.B.C.A. S.XI was designed by the chief engineer and designer of the company, M. Henri Jullien, and the initial test flights were made by the firm's chief test pilot, M. Charles Wouters, whom many British aircraft owners and pilots will have met on several occasions at meetings in Belgium and Holland. The first test was made on August 12, and indicated that no serious alterations were likely to be necessary, the machine handling well. We understand that accurate performance tests, etc., have not yet been made, and the performance figures given in the

table on the next page are to be regarded as estimated figures.

In general design the S.A.B.C.A. S.XI is a high-wing, semi-cantilever monoplane of all-metal construction, fitted with three "Jupiter" engines of 420 h.p. each, built in Belgium by the S.A.B.C.A. company under licence from the Gnome-Rhone company.

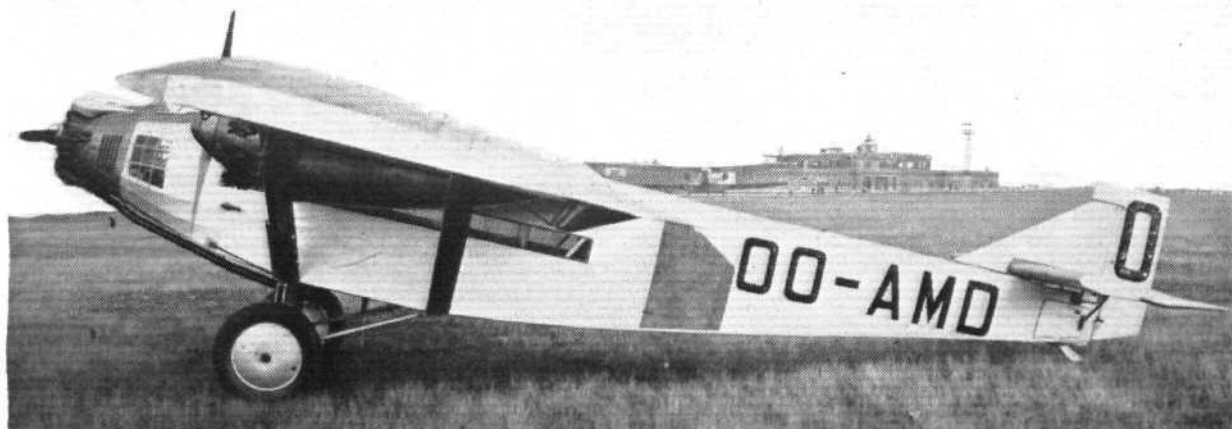
Although mainly intended as a passenger-carrier, and normally equipped with seats for 20 passengers, the S.XI can also be used as a freighter, the seats being removable and the whole of the cabin space then being available for freight.

That the S.XI is not a small machine may be gathered from an examination of the figures published in the table on the next page. For a wing span of 72 ft. 6 in. and a wing area of 1,042 sq. ft. the maximum permissible gross weight is 14,520 lb. It is classed by the manufacturers as a *gros porteur*, although in these days of really large machines the S.XI should, presumably, be regarded as a medium-sized aircraft.

The tankage provided is large (634 gallons), but normally it is not intended that the machine should be used on stages so long as to require the whole of the tank capacity. The normal non-paying load (*i.e.*, crew, etc.) is 352 lb. (160 kg.). For various quantities of fuel the range and pay load are as set out in the following table:

Range (miles)	310	465	605	840
Fuel and oil (lb.) . .	1,540	2,200	2,860	3,960
Pay load (lb.)	3,520	2,860	2,200	1,100

In each case the cruising speed is estimated at 200 km./h. (124 m.p.h.). Even at the shortest range



THE S.A.B.C.A. S.XI: This side view and the front view at the top of the page give a good idea of the general lines of this new Belgian and commercial all-metal monoplane. The engines are 420 h.p. "Jupiters."



A BELGIAN COMMERCIAL MONOPLANE: The S.A.B.C.A. S.XI is of all-metal construction except for the fuselage covering, which is fabric. The wings are covered with flat Duralumin sheets.

contemplated, it will be observed, the pay load is only 2.8 lb./h.p. based on maximum power. This does not appear to be a very high figure, but as the ratio of gross to tare weight is about the normal (1.59) it is to be assumed that the relatively low pay load is due to a considerable power reserve. This seems to be borne out by the figure for power loading, which is only 11.5 lb./h.p. It is likely also that the figures given refer to the machine equipped for passenger carrying, and that if the cabin were stripped of equipment, such as would be the case if the machine were used for carrying freight, the tare weight would be reduced and the pay load correspondingly increased.

As already mentioned, the cabin has seating accommodation for 20 passengers. It is 19 ft. long, 8 ft. 6 in. wide, and 7 ft. 2 in. high, which gives a cabin volume of about 170 cu. ft. This is, of course, available for freight when the cabin equipment is removed. The seats are arranged in five rows of four, two seats on each side in each row, with a gangway down the centre. If desired the cabin can be equipped for night journeys, in which case there is room for 6 berths.

The S.XI is of all-metal construction, the only exception being the fuselage covering, which is doped fabric.

The semi-cantilever wing is built entirely of metal, the spars being of high-tensile steel and the ribs of Duralumin, which latter material is also used, in flat sheets, for the wing covering. The whole trailing edge of the wing, for a distance of more than 6 ft., is built as a detachable unit in order to facilitate transport.

The fuselage is a welded steel tube structure, covered with fabric, and the tail surfaces are of Duralumin, including the covering. The wing bracing struts are of high-tensile steel stream-lined with Duralumin fairings.

An undercarriage of the two-wheel type is fitted, and the wheels are provided with Bendix brakes.

The cockpit is placed ahead of the wing, immediately behind the central engine, and has room for a navigator as well as for pilot and assistant pilot.

To relieve the pilots on long flights, the tailplane is provided with a tail trimming gear, and the vertical fin is so arranged that it can be offset to left or right, thereby enabling the pilot to fly a straight course without a large load on the rudder when one wing engine is stopped.

The main data relating to the S.A.B.C.A. S.XI are given in the following table:—

Dimensions			
Length o.a.	55 ft. 5 in.	(16.9 m.).
Wing span	72 ft. 6 in.	(22.12 m.).
Wing chord	14 ft. 9 in.	(4.5 m.).
Height o.a.	13 ft. 5 in.	(4.1 m.).
Wing area	1,042 sq. ft.	(96.8 m. ²).
Weights			
Power plant	3,300 lb.	(1 500 kg.).
Air frame	5,800 lb.	(2 633 kg.).
Tare weight	9,100 lb.	(4 137 kg.).
Disposable load	5,420 lb.	(2 463 kg.).
Max. permissible gross weight	14,520 lb.	(6 600 kg.).
Wing loading	13.9 lb./sq. ft.	(68.2 kg./m. ²).
Power loading	11.5 lb./h.p.	(5.24 kg./CV).
"Wing power"	1.21 h.p./sq. ft.	(13 CV/m. ²).

Performance		
Max. speed near ground	137 m.p.h. (220 km./h.).
Cruising speed	124 m.p.h. (200 km./h.).
Landing speed	62 m.p.h. (100 km./h.).

$$\text{Everling "High-speed Figure"} \frac{\eta}{2k_p} = 14.5$$

Air Mail Pillar Boxes

THE Civil Aviation Section of the London Chamber of Commerce learns that more Air Mail letter boxes are soon to be erected in different parts of London. There are at present 13 of these special blue posting boxes in the City and West End for the reception of air mail correspondence only. The use of these special blue boxes as a rule gives a later time of posting. The letters are collected from them by special Air Mail motor vans and conveyed direct to the Air Mail despatching point at the General Post Office, thus ensuring the greatest possible rapidity of transit and certainty of connection. Arrangements are also being made for a number of these special blue boxes to be erected in the Provinces. Edinburgh is to have three, Glasgow two, Birmingham three, Liverpool two and Manchester four. The Section has from its inception in 1929 been advocating better and extended Air Mail postal facilities, and it is encouraging to know that more of these blue posting boxes are to be provided.

Air Union's Increased Traffic

WHILE railway and steamship passenger traffic is seriously down, air transport is forging ahead. Statistics made available to-day by the Air Union reveal that in July there was an increase of 500 passenger bookings between Paris and London over the corresponding period last year. "We attribute," the company states, "the increase in business to the growing confidence in the safety, comfort and convenience of air travel, and also to the fact that practically a convert

to flying becomes a permanent user of the air lines. During the past year two London business men have made a total of 287 crossings between Paris and London by the Golden Ray Service." The Air Union's figures show that during July, 353 crossings between Le Bourget and Croydon were made without a single machine failing to finish the journey, a total of 79,627 miles were flown, and 2,081 passengers were carried, as compared with 1,582 over the corresponding period of last year. Over the whole Air Union system, including the Marseilles-Paris service, 777 scheduled journeys were flown during July, a total of 172,391 miles were flown, 3,465 passengers were carried, and 448,250 lb. of merchandise and 19,918 lb. of mails were transported without any mishap.

European Air Mails

THE Postmaster-General announces that, in consequence of changes in the timing of the aeroplanes, the latest times for posting air mail correspondence for European destinations in the air mail letter-box outside the General Post Office, London, are as shown below, and correspondingly earlier in other air mail boxes:—

Daily (except Sundays).—6.30 a.m.—France, Italy, Switzerland. 7.0 a.m.—Austria, Belgium, Czechoslovakia, Denmark, Germany, Holland, Hungary, Norway, Poland, Russia, Sweden. 10.30 a.m.—Denmark, France, Holland, Italy, Norway, Sweden, Switzerland. 3.30 p.m.—(except Saturday)—Austria, Czechoslovakia, Hungary. (Daily)—France. 8.0 p.m.—Austria, Czechoslovakia, Denmark, Germany, Hungary, Poland. 11.0 p.m.—(except Saturday)—Belgium.

The 5.0 p.m. service to Holland and Scandinavia has been discontinued.

BOOK REVIEWS

THE AIR ANNUAL*

SQUADRON LEADER BURGE, O.B.E., and Messrs. Gale & Polden, Ltd., are to be congratulated on the production of the third volume of the "Air Annual of the British Empire." The series of articles on special aspects of aircraft and flying make particularly good reading. One quite remarkably good article is "The Future of Privately Owned Aircraft," by L./AC. N. Beaumont, which was the winning essay in a competition among airmen serving in the Coastal Area. Tendencies in development have inspired several very thoughtful articles. Maj. Oliver Stewart, M.C., A.F.C., explains that as a "peak" seems to have been reached for the moment in the performance of service aircraft, the tendency now is to develop the fighting qualities rather than the aerodynamic qualities. Steadier platforms for shooting and bombing, armour for rear gunners, and increased weight of fire, are among the developments which he mentions. Not less interesting is Mr. Oswald Short's article on the development of British marine aircraft. He seems to be much impressed by the possibilities of the large float-plane as revealed so far by limited experience with the "Valetta." It would be an advantage if he would adopt the official definitions laid down in King's Regulations for the Royal Air Force, and realise that now a flying boat is one branch of the genus "seaplane." The other species is called "float-plane." By the same token, several writers would do well to realise that the terms "aeroplane" and "seaplane" are not opposed to one another. "Seaplanes" and "landplanes" are the two branches of the general term "aeroplane."

The air services of the Empire are described by vivid writers (that on the Australian lines is particularly good) without giving time tables. The latter are apt to be out of date before a volume gets to press, e.g., those of Australian National Airways, Ltd. A considerable number of leading types of British aircraft are described in detail, and a large number of photogravure plates of types is one of the chief attractions of the volume. A somewhat astonishing example of the enterprise shown in producing this volume is the addition of generous French and Spanish sections at the end. We are very pleased at finding that we can translate the heading "El Bristol Bulldog."

F. A. de V. R.

*The Air Annual of the British Empire. Edited by Sqd. Ldr. C. G. Burge, O.B.E., A.F.R.Ae.S. Gale & Polden, Ltd. 21s. net.

SOME GOOD MINISTRY PUBLICATIONS¹

A MOST excellent selection of publications has recently come out from the Air Ministry. It often seems peculiar that, although a great deal of attention is paid to the aeronautical literature which flows in a regular stream from the ordinary publishers, the books which come from the Air Ministry are given but cursory notice. This is entirely unjustified, for there are very few books giving so much for such a small cost as these.

First on my list is a *Gazetteer of British Meteorological Stations*. This, as its name implies, furnishes the reader with complete details of all the various stations supplying the information from which synoptic reports and weather maps are compiled. A book such as this cannot have a very wide appeal, but since gliding and private flying have become of considerable importance, the number of persons actively interested in the weather has grown enormously, and to those this beautifully got-up volume will prove of inestimable value.

A *Manual of Rigging for Aircraft* is a book with a wider appeal than the preceding one, in fact, without fear of contradiction, I say that no one who is interested in aircraft can afford to be without. At its price there is nothing to touch it, and it forms an excellent source of information for Ground Engineers. Its scope is extremely wide, for it starts with the aerodynamic principles of flight, which are lucidly explained, and then carries on right through all the various forms of construction and their rigging, both of land and seaplanes. Everything needed by the Ground Engineer with an "A" licence will be found here, and almost all that the "B" man ordinarily wants. It is profusely illustrated and even gives

details of all the tools used in rigging and ground aircraft work.

Two further volumes, which come under a rather different category, are the *Aircraft Route Book, Volumes I and III*. The first deals with the route from Plymouth to Basra and the second from Calcutta to Singapore. The former is, in reality, a Mediterranean version of the *Air Pilot*. It gives full details, in many cases with plans, of the routes:—Plymouth to Marseilles, Marseilles to Brindisi, Nisida to Malta, Marseilles to Malta via Sardinia, Marseilles to Gibraltar, Gibraltar to Malta, Malta to Alexandretta, Brindisi to Alexandretta, Brindisi to Alexandria, Athens to Alexandretta (direct route), Alexandretta to Basra, Plymouth to Gibraltar (direct). It is divided into two parts, the first of which gives details and helpful information concerning these routes, while the second gives everything which a pilot wishes to know about the various landing grounds and seaplane stations.

Part III is a more ambitious guide. It is divided in the same way, but the latter part is profusely illustrated with aerial photographs and plans, the majority of which appear to have been taken during the Far East flight of the Singapore Flying-boat Squadron.

The last on the list is the new issue of the *Air Pilot*. The *Air Pilot* has always been the standard source of information on aerodromes, and supplies that information in a manner which could not be beaten for clarity and conciseness. It is certain that no one who consistently flies about this country could do without its help. This new issue is really the old one brought up to date, and does not differ much in general form. Apart from information regarding all the licensed aerodromes in Great Britain, Northern Ireland, and the Irish Free State, one can also obtain a great deal about the general services, such as Meteorological and Wireless, and, in fact, everything appertaining to pilotage directions and the International Air Convention. The *Air Pilot* is kept up to date with monthly supplements, which are in such a form that they may easily be inserted in the volume, thereby retaining its handy form.

BARNARD ON FLYING²

PUBLICITY is necessary to everyone who wishes to get on in this world by undertaking jobs which may be called (not necessarily in the derogatory sense) stunts.

Capt. Barnard's wonderful record of flights in the "Spider" and other machines, and the present work he is doing with his "Circus," would all have failed had he not had adequate publicity. When I say failed, I naturally do not mean failed from the point of view of the accomplishment of the flight, but merely as mediums through which Barnard himself might make a living. It follows, therefore, that anything which can be done to keep one's name before the public is worthy of serious consideration by them. One of the most popular ways of doing this is by writing a book, but few things have been more overdone, and the time has now come when the mere name of the author is not enough; he must be able to fill his book with real meat, otherwise it will fizzle and nothing be gained.

Capt. Barnard is a very fine pilot indeed, and, as such, he has accumulated a vast store of experience from which he has been able to draw when writing this book. His explanations are simple and straightforward, while the diagrams with which he illustrates his text are for the most part admirably clear. His make-up is, unfortunately, somewhat disjointed, and leaves one with the feeling that he might have said so much more about each of his subjects. The general effect is, however, very pleasing, and no one can read the book without adding something to his or her knowledge of flying. In places the explanations are not quite clear, but on the whole the book gives people a good idea of how to fly correctly, although most of this information could be found in other books, albeit seldom in such an easily assimilable form.

AVIATION MADE COMMONPLACE³

THE recipe for a best seller seems, at the present time, to be a mixture of a well-psychoanalysed hero, the inner history of his amours, his reactions to the opposite sex and a lavish flavouring of a neurotic outlook on life in general. In the "Portrait of an Airman," by Phillip Arnall, you

have this mixture spread thickly on a slab of heavy pastry called "flying."

Taken as a psychological study the book is interesting, but if read from this point of view I cannot help likening the reader to the small boys who wallow in the harbour mud at low tide to get pennies thrown from the pier.

The interest of the psychological side is at no time made so deep or so vital as to override the unnecessary sordidness of the context, and it leaves me with a sense of wonder as to why it was written at all. Had it been a paper-covered novel of the cheap class I could have understood it, but in its published form I can see no justification for it whatever.

From another point of view, I suppose that we who have aviation thoroughly at heart might be glad of this book, for its very sordidness has stamped flying as an everyday and commonplace thing, and on this score I suppose we must tolerate it. From all other angles, however, it cannot be justified; there is not enough in it to satisfy the really prurient minded, and yet too much to call it a decent novel. It is simply sordid. I admit that the author knows what he is talking about when he comes to the flying parts, which is more than most such authors do; the pity of it is that he did not use his knowledge and talents to better purpose.

AIR AND AVIATION LAW¹

THIS book provides a volume dealing with the law relating to aviation as it is to be found in the Statutes passed by Parliament. Those Statutes and Regulations in force are set out with annotations as in most legal text books, in such a manner that they may be added to or varied as more material becomes available.

The author stresses the fact that the law with regard to aviation is still in its infancy, and admits of no doubt that it will grow into an important department. He has made a particular feature of his index, which is carefully compiled so that the volume should form a valuable handbook on the subject to all who have any connection with aviation.

A WAR NOVEL⁵

THIS is an excellent novel of the late war. It is thrilling enough to attract young readers, while at the same time having sufficient sense and plausibility to make it interesting to those who were themselves in the war. The idea of a secret service squadron with complete German credentials, operating from behind our lines and landing upon German aerodromes, is not a new one, but Col. Driggs has dressed it up in such a manner that it comes fresh, and, indeed, refreshing, after the surfeit we have had of neurotic war-flying novels emanating from America. Briefly, "The Secret Squadron" is a clean, thrilling and well-worth-reading flying novel of the war.

"DAEDALUS."

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¹*Gazette of British Meteorological Stations (M.O. 319), price 8s.*

¹*Aircraft Route Book (Part I, Plymouth to Basra), price 12s.*

¹*Aircraft Route Book (Part III, Calcutta to Singapore), price 20s.*

¹*A Manual of Rigging for Aircraft (Air Publication 1107), price 5s. 6d.*

¹*The Air Pilot (H.M. Stationery Office, Adastral House, Kingsway, London, W.C.2), price 12s. 6d.*

²*Barnard on Learning to Fly, by Capt. C. D. Barnard (Sampson, Low, Marston & Co., Ltd.). Obtainable from FLIGHT Offices. Price 15s. 6d. post free.*

³*"Portrait of an Airman," by Phillip Arnall (John Lane and the Bodley Head, Ltd., London). Obtainable from FLIGHT Offices. Price 8s. post free.*

⁴*Air and Aviation Law, by Wm. Marshall Freeman (Sir Isaac Pitman & Sons, Ltd.). Obtainable from FLIGHT Offices, price 8s. post free.*

⁵*"The Secret Squadron," by Laurence La Tourette Driggs (John Hamilton, Ltd.). Obtainable from FLIGHT Offices. Price 8s. post free.*

A TAIL OF AITCHES

(From *The Elevator*, Official Organ of the Lancashire Aero Club.)

Sez 'ERACLES to 'ADRIAN

"H'I calls it very 'ard."

Sez 'AMILCAR to 'ASDRUBAL

"H'it don't seem right to me

"That we alone of Hairyplanes

"Should find h'ourselves debarred

"From the feminine prerogative

"H'of being known as 'she.'

"'Cos h'all of us is sisters

"H'as h'everybody knows,

"H'in fact we're all the daughters

"H'of Mister 'Andley-Page,

"H'and yet 'e goes an' calls us 'e's

"H'and gives us such a nose!

"H'it makes a self-respectin' gal

"H'all quivery with rage!

"H'I wonder wot our other

"Little sisters will be called,"

Sez 'AMILCAR ('oo really is

A most religious gal)

"There's 'AM, of course, and 'ABBAKUK

"An' 'OSEA ('e was bald)"

"Well wot price 'ALLELUJAH?"

Sez the 'eathen 'ASDRUBAL!

"H'of course 'e'll pick 'istoric names"

Sez 'ADRIAN the sage,

"Like 'ILDEBRAND and 'ARPAGON

"And 'UDIBRAS and such."

"EZEKIAH," chips in 'AMILCAR,

"'E's biblical, is Page."

"'IPPOPOTAMUS" sez 'ASDRUBAL,

"Hey ANN, you ain't said much."

Then 'ANNIBAL looked down 'er nose

(Yet couldn't see 'er tail!),

"Oh 'ADJI-BABA, 'OCUS-POCUS

"And 'ARICOT-VERT," she said,

"But wotever 'e calls me' sisters

"'E can just re-christen me

"Cos me' name is 'ORS-DE-COMBAT

"And I'm going 'ome to bed!"

An Enthusiastic Pioneer

We have received a letter from Mrs. Maurice Hewlett—who will be remembered in connection with the early flying days at Brooklands as a very active partner of the Hewlett and Blondeau Flying School—saying she is returning to New Zealand, as far as she can, by air. The 500 miles from Batavia to the North of Australia is the only portion at present not provided with air transport. Mrs. Hewlett adds that she is trying to fly there because she thinks it would help to cultivate airmindedness in New Zealand, which at present is not very pronounced. She has been doing much to try and get civil aviation going in New Zealand, by means of lectures, etc. Every success to her efforts.

An Important Amalgamation

An event of considerable importance is the amalgamation of the aviation department of Selfridge & Co., Ltd., and the company Brian Lewis & C. D. Barnard, Ltd. The new company, which is to be known as Brian Lewis & Co., Ltd., will have offices at 30, Conduit Street, S.W.1, and will continue to deal in new and second-hand aircraft, with showrooms at Heston and Hooton, Liverpool. Mr. Gordon Selfridge, Jnr., will be the chairman, with Mr. Brian Lewis managing director. Mr. Dudley Page will be in charge at Heston and Mr. W. Gairdner at Hooton. The Aviation Department of Selfridge & Co., Ltd., will continue to sell all aviation accessories at 400, Oxford Street, W.1, under the management of Mr. C. Clarkson.

AIRISMS FROM THE FOUR WINDS

A STRANGE-LOOKING BEAST: The De Havilland-built Autogiro has but three rotor blades. A wheel under the nose prevents overturning on the ground. Another, equally strange (if not more so), view of this remarkable machine will be found below.



The Lindberghs Reach Tokio

AFTER several annoying delays in the Kurile Isles, Col. and Mrs. Lindbergh have concluded their flight, in a Lockheed "Sirius" mono-seaplane, from New York to Tokio. They landed at Kasumigaura aerodrome on August 26, and proceeded by train to Tokio, where they were accorded an enthusiastic welcome. They left New York on July 27, and the total flying time for the trip has been 84 hr. 5 min.

So Does Fraulein von Etzdorf

FRAULEIN MARGA VON ETZDORF, who left Berlin on August 18 in a Junkers "Junior" (Armstrong Siddeley "Genet") en route for Tokio, has also concluded her flight. She reached Seoul from Mukden early on August 28, and reached Tokio the following afternoon.

Miss Amy Johnson

MISS AMY JOHNSON resumed her homeward flight from Japan on August 28, when she flew from Osaka to Seoul. She reached Seoul some 40 min. after Fraulein von Etzdorf had left, and so missed meeting the German "Amy Johnson." She arrived at Mukden later the same day, and left again the following morning.

Sir Alan Cobham Home

SIR ALAN COBHAM, who has been carrying out a survey flight in Central Africa, in a Short "Valette" seaplane (Bristol "Jupiter"), has arrived back in England. He reached Naples on August 26, and, after a short delay owing to weather at Sete on August 29, arrived at Southampton on August 31. The next day Sir Alan flew from Southampton to Rochester, passing over London on his way during the luncheon hour.

Graf Zeppelin

HAVING arrived safely back at Friedrichshafen early on August 20 after her English trip, the German airship *Graf Zeppelin* set out on its 216th flight on August 29 en route for Brazil—her second trip to South America. Dr. Eckener was in command and there were 13 passengers, a crew of 44, and 400 lb. of mail on board. The object of the flight was to demonstrate that a regular commercial airship service to South America was a feasible proposition

at any season of the year. In the evening of August 30 Friedrichshafen received a message from the airship giving her position approximately 180 miles south-west of Gibraltar, and later she was reported over Tangier. She passed over Rio de Oro at 6.20 a.m. (B.S.T.) on August 31 and over Cape Blanco shortly after. The airship reached Pernambuco in the evening of September 1 after a stormy passage across the Atlantic.

Do.X No. 1 and No. 2

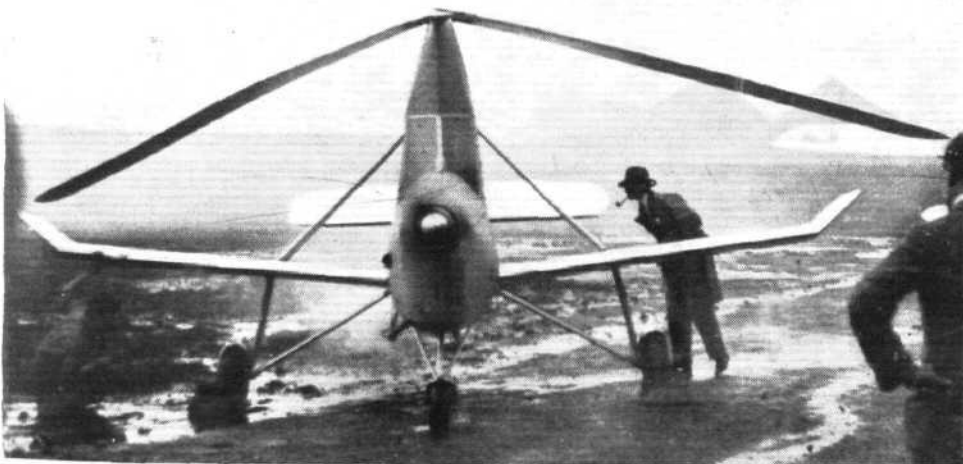
THE German flying-boat Do.X 1, continuing her flight from South America to New York, reached Charleston from Miami on August 25, and Norfolk, Virginia, next day. The flying-boat arrived at New York on August 27.

The second Do.X, which was built to the order of the Italian Government, and is fitted with Italian Fiat engines, flew from Friedrichshafen to Spezia, Italy, on August 28. During this flight the flying-boat established a world's record for heavy aircraft by reaching an altitude of 10,000 ft. She carried a crew of 12 Germans, a commission of Italian officers, and a cargo of 42 tons. On September 1 the King of Italy, under the guidance of Gen. Balbo, inspected the flying-boat in Lake Massinchicci.

Wilbur Wright Memorial Lecture

THE Wilbur Wright Memorial Lecture for 1931 will be delivered by Mr. Glenn Martin in the Science Museum, South Kensington, at 9.15 p.m. on Wednesday, September 16. Admission will be by ticket only. The lecture will be on "The Development of Aircraft Manufacture." Mr. Martin's lecture will emphasise the need of systematic research in the science of aircraft manufacture to facilitate the growth of aeronautics. He will endeavour to define the fundamentals toward which research should be directed, and something of the manner in which such studies should proceed. In 1908, when Mr. Martin taught himself to fly, he acquired sufficient manufacturing facilities

to carry on his experiments in aerodynamics. Since then he has been keenly interested in the co-ordination of manufacturing technique and design requirements in such a manner that low selling costs can be maintained with a high wage scale. He will make known the methods by which research in manufacturing has been promoted within his organisation for many years. The lecture will include some of the more notable results recently achieved, and



THE NEW AUTOGIRO: Front view of the latest type, built for the Cierva Autogiro Company by the De Havilland Aircraft Company. The engine is a "Gipsy III."

plans for further work of the same character will be described.

Learning to Fly

THE Automobile Association have recently prepared an interesting little pamphlet on the subject of learning to fly. It is primarily intended for those members who wish to obtain a pilot's "A" licence. The first part of the booklet deals with the regulations at present in force, and tells the reader in a brief manner just what he has to comply with. The second part is a well-arranged list of most of the important flying clubs, giving such details as their rates, subscriptions, aircraft available, and the best method of getting to the club. Copies of this very handy publication may be had free upon application to the Automobile Association, Fannum House, Coventry Street, London, W.1. or any of their branch offices.



THE PREMIER IN GERMANY: A short time ago Mr. Ramsay MacDonald visited Berlin by air, and our photograph shows him getting into the Fairey III.F. (Lion) at Tempelhof for the return flight.

AIR MINISTRY NOTICES

AIR MINISTRY NOTICE TO AIRMEN, SERIES A

No. 48 of 1931. Cranbrook Air Light : Altered Period. (817810/28.)

A notification that (1) The experimental alteration in the period of the Cranbrook air light is terminated. On and after the night of August 13-14, 1931, the period and characteristics of this light will be as shown in *The Air Pilot*, Vol. 1, page 37. These are as follow:—

Period.—7 sec.

Characteristics.—Light 0.1 sec.; eclipse 0.5 sec. Light 0.1 sec.; eclipse 0.5 sec. Light 0.1 sec.; eclipse 5.7 sec.

No. 51 of 1931. Schneider Trophy Contest : Restriction of Flying. (128573/31.)

Flight in the neighbourhood of the Schneider Trophy Contest will be subject to the following restriction:—

During the period from 24.00 hr. B.S.T. on September 11, 1931, to 24.00 hr. B.S.T. on September 25, 1931, or to 24.00 hr. B.S.T. on the day on which the Schneider Trophy Contest is completed, whichever is the earlier, no aircraft other than aircraft competing in the Contest may fly over the following area:—

The area enclosed by straight lines drawn from Yarmouth Pier to Lymington Pier and thence to Netley Castle; by the line of high water between Netley Castle and Hamble Spit; by straight lines drawn from Hamble Spit to Horsea Wireless Telegraphy Station, thence to Baffins Pond, and thence to Havant Railway Station; by the railway line between Havant Railway Station and Chichester Railway Station; by straight lines drawn from Chichester Railway Station to Selsey Bill, thence to Culver Down Wireless Telegraphy Station, and thence to Egypt Point Lighthouse; and by the line of high water between Egypt Point Lighthouse and Yarmouth Pier.

N.B.—In this connection it should be noted that the term aircraft includes gliders, kites and fixed balloons.

It should be observed that Cowes seaplane station, which was notified in Notice to Airmen Series A No. 46 of 1931 as available for use by visiting marine aircraft, lies within the prohibited area described above. Aircraft desiring to use this seaplane station must, therefore, arrive before the commencement of the period of prohibition as defined above, and will not be free to depart until the expiration of the period.

NOTICES TO GROUND ENGINEERS

No. 41 of 1931

A Modification to the Blackburn Bluebird, IV/2.N.96 (60,361/30).
A modification to the Blackburn Bluebird, IV/2.N.96 (60,361/30), has been introduced to reinforce the top longerons in the cockpit bay. This modification is the fitting of 2 B.A. tie rods along the top longerons between the dashboard bulkhead and the bulkhead aft the cockpit. The forward longeron attachment fitting part No. N.A. 108 is replaced by part No. N.A. 248. The above modification must be incorporated in all aircraft affected within three months from August 6 in order that the C. of A. of the aircraft shall remain valid.

No. 42 of 1931. Simmonds' Spartan two- and three-seater aircraft with Clark YH wings : Modifications to wings and ailerons. (114655/31.)

As cases of vibration have occurred on Spartan two- and three-seater aircraft fitted with Clark YH wings, the following modifications are to be embodied:—On the top plane, aileron is to be deleted and the trailing edge extended to the wing tip. The rear spar is to be increased in both by means of spruce laminations top and bottom and a modified rib attachment to Drawing No. S.K. 360, Issue A. In the bottom plane, the rear spar is to be increased as in the top and the rib attachment also modified to Drawing No. S.K. 359, Issue C. The aileron is now to be fitted to the bottom plane only and the horn balance deleted. The span is increased to 8 ft. 7½ in. to Drawing No. S.K. 364, Issue A. These modifications must be incorporated in all aircraft that are affected within two months of the date of this notice in order that certificates of airworthiness may remain valid. Until the aforementioned modifications are carried out, C. of A.'s are restricted to normal category flying. This does not apply to Spartan "Arrow" aircraft or to Simmonds' Spartan two- and three-seater aircraft of symmetrical-section wings.

No. 43 of the year 1931. Westland "Widgeon" Aircraft : Flying Controls. (60361/30.)

Attention is drawn to Modification Widgeon/14, Flying Controls (adjustable type rudder bar foot rests strengthened).

Should the outside of one of the present adjustable rudder bar foot rests become seriously distorted in service, there is a possibility of it jamming against the side bracing member of the fuselage. The above-mentioned

modification arranges for strengthening angle brackets to be fitted to both sides of the foot rests, in order to avoid this possibility.

The above modification must be incorporated in all aircraft that are affected within six months of the date of this Notice in order that the C.'s of A. of the aircraft shall remain valid.

The necessary new parts can be obtained on application to:—

The Westland Aircraft Works, Yeovil, Som.

(August 17, 1931.)

No. 44 of the year 1931. Cirrus Hermes Engines. (95424/31.)

The nomenclature shown below has been adopted for Cirrus Hermes engines with the object of defining the various series.

Mark I Cirrus Hermes—Upright type having wet sump lubrication.

Rated power—B.H.P. (normal) 104 at 1,900 r.p.m.

Mark I engines altered to incorporate Modifications H.M. 109, auxiliary cylinder lubrication, piston scraper rings, and H.M. 112, strengthened exhaust valves, in accordance with Notice to Aircraft Owners and Ground Engineers No. 38 of 1931, which have been marked "Mod. Mark II," and are fitted with full skirted pistons together with a Claudel Hobson A.V.48.D. carburettor, may have the rated power altered to the following:—

B.H.P. (normal) 106/110 at 2,000 r.p.m.

The engine name plate and log book should be amended accordingly.

Mark II Cirrus Hermes—Upright type, wet sump lubrication. As Mark I, except for incorporation of the modifications listed below.

Original rating—B.H.P. (normal) 104 at 1,900 r.p.m.

Modifications:—Auxiliary cylinder lubrication (Mod. No. H.M. 109). Fully skirted pistons. Piston scraper rings. Strengthened type exhaust valves (Mod. No. H.M. 112). Claudel Hobson A.V.48.D. carburettor.

Mark II engines embodying the modifications listed in sub-paragraph (ii) may have the rated power altered as follows:—B.H.P. (normal) 106/110 at 2,000 r.p.m. The engine name plate and log book should be amended accordingly.

Mark II.B. Cirrus Hermes—Inverted engine (dry sump).

This engine incorporates the essential features of the Mk. II, but is designed to run as an inverted engine. The rating is as follows:—B.H.P. (normal) 104 at 1,900 r.p.m.

(August 26, 1931.)

No. 45 of the year 1931. Plywood in Main Structural Members (126324/31.)

Cases have occurred where three-ply in built-up spars and other important structural members has buckled, and the glued joints have become affected.

The attention of all concerned is drawn to the necessity for periodical examinations for these defects.

Certificates of Airworthiness will not be renewed, and Ground Engineers must not sign Daily Certificates for aircraft in which there are parts with these defects.

(August 28, 1931.)

No. 46 of the year 1931. Blackburn Bluebird Mk. IV Aircraft : Top Sternpost Joint. (60361/30.)

It is hereby notified that:—Cases have occurred of the raised flange, which secures the sternpost to the top longeron, bending and cracking in way of the taper pin. This fitting should therefore be inspected after every 25 hours' flying for signs of failure.

A Modification No. N.S.1 has been prepared which incorporates a redesigned sternpost fitting and duralumin end plugs for the longerons, particulars of which, together with the necessary parts, may be obtained from the Blackburn Aeroplane and Motor Co., Brough, E. Yorks. This modification must be incorporated in all aircraft that are affected within six months of the date of this Notice in order that the Certificate of Airworthiness of the aircraft shall remain valid.

Notice to Aircraft Owners and Ground Engineers No. 22 of 1931 is hereby cancelled.

(August 31, 1931.)

No. 47 of the year 1931. Blackburn Bluebird Mk. IV Aircraft : Radius Rod Eyebolt. (60361/30.)

Cases have occurred of the eyebolt securing the radius rod to the axle, cracking at the flange: this eye bolt should therefore be inspected after every 10 hours' flying for signs of cracking. A redesigned part, No. N.A.7030, is obtainable from the Blackburn Aeroplane and Motor Co., Brough, E. Yorks. In order to fit this, it is necessary to increase slightly the counter boring on the axle forging. This modification must be incorporated in all aircraft that are affected within three months of the date of this Notice in order that the Certificate of Airworthiness of the aircraft shall remain valid.

Notice to Aircraft Owners and Ground Engineers No. 32 of 1931 is hereby cancelled.

(August 31, 1931.)

THE ROYAL AIR FORCE

London Gazette, August 25, 1931.

General Duties Branch

The follg. flight cadets having successfully passed through the R.A.F. College, Cranwell, are granted permanent comms. as Pilot Officers with effect from and with seny. of July 25:—C. W. Williams, N. C. S. Rutter, A. Mellwaine, W. E. Oulton, S. C. Widdows, A. D. Messenger, A. C. Johnstone, E. C. Ingham, H. W. A. Chesterman, F. E. Stokes, G. J. L. Read, A. C. Shearn, L. F. Brown, C. W. M. Ling, W. W. Stainthorpe, W. P. Welch, N. H. Jackson, D. Addenbrooke, L. V. Andrews, D. I. P. Macnair, J. O. W. Oliver, N. A. R. Halliday, W. H. N. Turner, R. H. Page. Flight Cadet P. E. Drew, having successfully passed through the R.A.F. College, Cranwell, is granted a permanent commn. as Pilot Officer on probation with effect from and with seny. of July 25; Pilot Officer J. B. T. Whitehead is promoted to rank of Flying Officer (Aug. 3); Pilot Officer M. G. C. Chadwick takes rank and precedence as if his appointment as Pilot Officer bore date March 1, 1930. Reduction takes effect from July 27; Air Marshal Sir W. G. H. Salmond, K.C.B., K.C.M.G., D.S.O., is placed on half-pay list, scale A, Aug. 25 to Sept. 24 inclusive; Flying Officer R. C. Edwards is transferred to Reserve, Class A (Aug. 14).

Erratum

In Gazette Aug. 18 (FLIGHT, Aug. 28, 1931, page 871).—Pilot Officers on probation confirmed in rank. For July 19 read July 12.

RESERVE OF AIR FORCE OFFICERS

General Duties Branch

Pilot Officer on probation J. C. Corby is confirmed in rank (June 30). (Substituted for Gazette Aug. 14). The follg. Flying Officers are transferred from Class C to Class A:—R. Benham (Aug. 11); L. G. Rumsey (Aug. 11). The follg. Flying Officers are transferred from Class A to Class C:—V. C. Cordingley (June 1); J. C. McCormick (Dec. 2).

The follg. relinquish their comms. on completion of service:—Flight-Lieutenants: R. A. Birkbeck, D.F.C. (May 12); G. B. Holmes (May 31). Flying Officers: C. W. Calder (May 15); J. Hart (May 15); A. J. Brewin (May 22); J. E. Taylor (May 29); R. R. Rich (July 31). Pilot Officer C. Wilson (May 1).

Accountant Branch

Flying Officer F. W. Healey relinquishes his commn. on completion of service and is permitted to retain his rank (May 19).

Erratum

In Gazette Aug. 18 (FLIGHT, Aug. 28, 1931, page 871).—Flying Officers promoted to Flight-Lieutenants. For Aug. 12 read Aug. 19.

SPECIAL RESERVE

General Duties Branch

G. B. Iles is granted a commn. as a Pilot Officer on probation (July 25).

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Group Captain V. O. Rees, O.B.E., to Home Aircraft Depot, Henlow, pending taking over Command, 24.8.31.

Wing Commanders: R. H. Kershaw, to R.A.F. Depot, Uxbridge, 29.7.31. T. V. Lister, to R.A.F. (M.T.) Depot, Shrewsbury, pending taking over command, 19.8.31.

Squadron Leaders: R. F. S. Leslie, D.S.C., D.F.C., A.F.C., to No. 99 (B) Sqdn., Upper Heyford, 31.7.31. C. S. Richardson, M.B.E., to H.Q., Air Defence of Gt. Britain, Uxbridge, 26.8.31. A. R. Churchman, D.F.C., to School of Army Co-operation No. 16 (AC) Sqdn., Old Sarum, 17.8.31. C. R. Cox, A.F.C., to R.A.F. Depot, Uxbridge, 3.8.31. E. W. Broadberry, M.C., to R.A.F. Base, Malta, 14.8.31.

Flight Lieutenants: R. J. Rodwell, to H.Q., Wessex Bombing Area, Andover, 15.8.31. R. H. Horniman, to Experimental Sectn., Royal Aircraft Estab., S. Farnborough, 16.8.31. R. O. Jones, to School of Photography, S. Farnborough, 17.7.31. A. F. Hutton, to School of Photography, S. Farnborough, 26.7.31. A. P. Revington, to School of Naval Co-operation, Lee-on-Solent, 16.8.31. W. J. Daddo-Langlois, to Marine Aircraft Experimental Estab., Felixstowe, 24.8.31. A. J. Warwick, to Aeroplane and Armament Experimental Estab., Martlesham Heath, 17.8.31. F. E. Nuttall, to No. 21 Group H.Q., West Drayton, 20.8.31. C. A. Bell, to Station H.Q., Worthy Down, 25.7.31. A. A. Jones, to No. 35 (B) Sqdn., Bitcham Newton, 22.8.31.

C. E. Carter, to No. 1 (F) Sqdn., Tangmere, 14.8.31. W. A. Opie, to No. 1 School of Tech. Training (Apptes.), Halton, 4.8.31. H. E. Nowell, to R.A.F. Reception Depot, West Drayton, 4.8.31. L. W. Cannon, to R.A.F. (M.T.) Depot, Shrewsbury, 4.8.31. C. F. C. Coaker, to No. 1 School of Tech. Training (Apptes.), Halton, 4.8.31. G. W. Hayes, to No. 1 School of Tech. Training (Apptes.), Halton, 4.8.31. W. J. Campbell, to R.A.F. College, Cranwell, 4.8.31. G. H. Shaw, to No. 2 Flying Training School, Digby, 4.8.31.

Flying Officer A. F. C. Booth, to R.A.F. College, Cranwell, 5.8.31.

Pilot Officer R. L. Hoyle, to R.A.F. Depot, Uxbridge, 1.5.31.

Stores Branch

Wing Commanders: C. L. Archbold, to H.Q., Coastal Area, on transfer to Home Estab., 31.8.31. T. Fawdry, to No. 1 Stores Depot, Kidbrooke, for Stores duties, 17.8.31.

Medical Branch

Group Captain H. W. Scott, to No. 21 Group H.Q., West Drayton, for duty as Senior Med. Officer, 18.8.31.

Squadron Leader T. R. S. Thompson, to R.A.F. Depot, Uxbridge, 14.7.31.

Flying Officer O. M. Fraser, to R.A.F. Station, Hawkinge, 14.8.31.

Dental Branch

Flying Officer R. Scoggins, to No. 1 School of Tech. Training (Apprentices), Halton, 15.8.31.

Royal Air Force Flight Cadetships

The Air Ministry announces:—Aircraft Apprentices W. D. Disbrey, D. Finlay, J. V. C. Badger, B. H. Becker and B. A. Chacksfield from No. 1 School of Technical Training (Apprentices) Halton, and Aircraft Apprentice R. R. Fairweather from the Electrical and Wireless School, Cranwell, have been selected for cadetships at the Royal Air Force College, Cranwell, on the result of the examinations held on completion of their three years' training as aircraft apprentices.

The "Lord Wakefield" Scholarships, valued at £75 each, have been awarded to Flight Cadets W. D. Disbrey and D. Finlay, and the "Hyde Thomson" Memorial Prize, valued at about £33, to Flight Cadet R. R. Fairweather.

The Air Council have awarded Prize Cadetships, each of the value of £105 per annum for two years, to the following successful candidates at the examination held in June, 1931, for entry into the Royal Air Force College, Cranwell:—A. F. R. Bennett, Harrow County School. G. N. Hancock, Nottingham High School. K. Gray, Leeds Grammar School. T. L. Moseley, Tamworth Grammar School. G. A. V. Knyvett, Malvern College. J. A. P. Owen, St. Bees School, Cumberland.

Transfer of Officers to the Reserve

The undermentioned short service officers become due for transfer to the reserve or for relinquishment of commission, on completing their period of service on the active list:—

February-March, 1932

Flight-Lieutenant: Leo O'Connor, M.B., B.Ch., on February 2.

Flying Officers: Cecil Ralph Clarke, Garth Edmonds Klein, John Henry Lindell, John Fergus McKenna, and Donald Teale Saville, on February 14; Reginald David, Richard Claude Hancock, Gerald Nassau Stuart Lane, Geoffrey William Monk, and Anthony George Carl Somerhough, on March 19.

To relinquish commission. Not liable for reserve service.

No. 4 Flying Training School

The undermentioned officer and airman pilot have been awarded Distinguished Passes on completion of a course of *ab initio* flying training at No. 4 Flying Training School: Pilot Officer I. G. Ross and Corpl. F. D. Terdrey.

Attachment of Foreign Officers to the Royal Air Force

Lieutenant K. Kondo, of the Japanese Naval Air Service, has been attached to the Home Aircraft Depot, Henlow, from August 4, 1931, to

undergo the two years' course of Engineering. With reference to previous notices, Lieutenant Pesatchich, of the Yugo-Slav Air Service, is at present with No. 58 (Bomber) Squadron for the period 26.7.31 to 27.8.31. Lieutenant Commander Sax, also of the Yugo-Slav Air Service, is with No. 2 (A.C.) Squadron from August 8 to 22, 1931.

Grant of Permanent Commission or Medium Service.—The following officers have been selected for permanent commission or medium service, as indicated:—

(A) Permanent Commission.

Flight Lieutenant Ian Anstruther Bertram (selected provisionally).

(B) Medium Service.

Flight Lieutenant William Hawkesley Burbury; **Flying Officers** Leslie Vincent Bennett, Leonard Turnell Carruthers, Raymond William Pennington Collins, Montague Cecil Collins, Harry Alfred George Comerford, Colin Edward Victor L'Estrange Feasey, Noel Holroyde Fresson, Robert Frank Gandy, Geoffrey Augustus Graydon Johnston, Leslie Lindo King, D.F.C., Duncan Bassett McGill, Andrew McKee, Walter Roy Monro Higgs, Geoffrey Fox Overbury, Murray Meyrick Restell-Little, John Herbert Thomas Simpson, Anthony George Carl Somerhough, Reginald William Kennedy Stevens, and Leslie Maurice Woolveridge.

Royal Air Force Memorial Fund.

The usual Meeting of the Grants Sub-Committee of the Fund was held on August 6.

Mr. W. S. Field was in the Chair, and the other Member of the Committee present was Air Commodore B. C. H. Drew, C.M.G. The Committee considered in all 11 cases and made grants to the amount of £182 14s. 6d.

At the meeting held on August 20, the Committee considered in all 11 cases, and made grants to the amount of £209 13s. 2d.

Sealand Packing Depot, R.A.F.

A LANDING ground has been brought into use for aircraft which are being delivered to the R.A.F. Packing Depot, Sealand, Chester. It is to the west of the depot and south of the railway bounding No. 5 Flying Training School aerodrome. The letters "P.D." are clearly set in chalk on the ground. It is important that pilots of aircraft for the Packing Depot should abide by the aerodrome circuit signals of No. 5 F.T.S., and particular care should be exercised when the wind is from the south, in view of the fact that aircraft from the school will, on such occasions, take off over the Packing Depot landing ground.



AIR POST STAMPS

By DOUGLAS ARMSTRONG

Zeppelin's Air Mail

It was not to be expected that the latest flight of the airship *Graf Zeppelin* would be allowed to pass unrecorded in the air post collection. A large mail of letters was brought from Friedrichshafen on August 18 and delivered in London on the following day, each item of which was impressed with a souvenir cachet in purple showing in oval format the Zeppelin passing over the Tower Bridge, together with the inscription "Luftschiff Graf Zeppelin—England Fahrt, 1931." The starting price for these flown covers is about 5s. apiece, in the London market. Having regard to the Arctic weather conditions prevailing in England at the time of the Zepp.'s visit it was perhaps appropriate that the stamps used to frank this special mail were those originally prepared for the North Polar trip, and bearing the words "Polarfahrt, 1931," comprising 1 mk. carmine, 2 mk. blue and 4 mk. sepia, depicting the dirigible flying over the world.

So far as is known, no mail, official or otherwise, was carried by the *Graf Zeppelin* on her return voyage from England to Germany.

Next month the giant airship is to undertake another Austrian cruise, and it is reported that distinctive stamps are already being prepared for the event at the State Printing Office, Vienna.

South-West African Air Post

At long last a use has been found for the air post stamps provided many moons ago by the postal department of South-West Africa in anticipation of the establishment of regular aerial communication with the Union itself. The first flight over a regular inland air mail route took place on August 1, 1931, when letters, etc., were conveyed by aeroplane between the following towns—Rehoboth, Mariental, Keetmanshoop, Okahandja, Omaruru, Otjiwarongo, Grootfontein, Swakopmund and Walvis Bay. Up to the time of writing no "flown covers" have yet reached England, although they are expected by the next South African mail, but as the air mail fee has been fixed at 4d. per half-ounce for letters and 1s. 6d. per lb. for parcels it would seem that the existing 3d. and 10d. air post stamps will need to be supplemented with ordinary postage stamps to make up the rates.

Air post collectors are reminded that covers originally prepared for despatch by the abandoned air service from Windhoek to Kimberley, which was to have commenced on April 1 last, exist bearing air mail stamps postmarked with various dates in the latter part of March. As, however, they were eventually forwarded by ocean mail to the Cape, they cannot be considered by any stretch of imagination as "flown covers," and are merely hybrids.

Air Mail in Malta

Although Malta has had a 6d. air mail stamp since 1928, the island was not until last June in direct aerial communication with any other country. As from June 17, 1931, however, the Italian air mail service between Genoa and Tripoli has touched at Malta in either direction. No special stamps have been provided, but a postmark lettered "Air Mail—Malta" has been introduced, in addition to which first flight covers were impressed with a violet cachet "1st Air Mail." Ordinary Maltese stamps are employed to pre-pay the air post fees, the overprinted 6d. denomination being reserved for letters forwarded to Australia, India, and Africa via Imperial Airways.

Sudan Air Stamps

By the time these notes are in print it is expected that the new definitive air mail stamps of the Sudan Government will be in circulation. As already foretold, the picturesque design represents an aeroplane circling over the Gordon monument at Khartoum, the values, colours and numbers of the initial printing being as follows:—5 millimes green and black (80,000), 10 mills. red and black (80,000), 15 mills. sepia and brown (100,000), 2 piastres orange and black (70,000), 3 pi. grey and black (90,000), 3½ pi. mauve and black (60,000), 4½ pi. grey and brown (60,000), 5 pi. blue and black (60,000).

Persian Air Post Passing

The picturesque air post stamps of Persia may shortly pass out of use in consequence of the termination of the contract between the Persian Government and the German "Junkers" Company owing to the insignificant amount of mail matter that is being transmitted by air nowadays. For this reason it is reported that several services have lately been suspended between Persian cities, and flights in other instances greatly reduced in number.

Air Stamps from Abyssinia

Less than two years ago the Ethiopian Government indulged in a commemorative stamp issue on the occasion of the arrival at Addis Abeba of the first aeroplane to be seen in that old-world Empire. Now a regular exchange of mails by air has been established with the French seaport of Djibuti, on the Red Sea, and a series of air-post stamps provided in connection therewith. The design, common to all of the seven values, depicts an aeroplane in flight over an outspread map labelled "Ethiopie," surmounted by the insignia of the Abyssinian air service and the date "16 Aout, 1929," in French, and Amharic characters, whilst at the foot of the design runs the designation "Avion Nessor Tafari"—the date and title of the original machine. Finely engraved and recess printed in upright rectangular format the Abyssinian air stamps embrace 1 guerdie, orange-red; 2 g., blue; 4 g., violet; 8 g., green; 1 Thaler, sepia; 2 Th., rose; and 3 Th., green. They were first used on an air mail despatched from Addis Abeba on June 17, 1931.

Central American Air Post

In consequence of the looting of large stocks of the regular air mail stamps of Nicaragua from the General Post Office at Managua, following the disastrous earthquake earlier in the present year, it was found necessary to re-issue the P.A.A. provisional air post stamps of 1929, surcharged with new values and the date "1931." Subsequently similar surcharges were applied to air stamps in the permanent type. New printings since received from the contractors in New York include supplementary values of 15 centavos purple and 20 centavos green, denoting the reduced rates for aerial postage.

A Presidential Decree of June 12 authorises the preparation of a new air mail stamp of 1 Colon denomination in the definitive series of Salvador, pending receipt of which 10,000 copies of the ordinary 1 Colon postage stamp of 1924-26 have been provisionally over-printed with the device of a small aeroplane, in red, bearing the words "Correo Aereo" in minute characters.

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NEW COMPANY REGISTERED

ROLLS AIRPORT AND CONSTRUCTION CO., LTD.—Capital £3,000; in £1 shares. Builders, government or public works contractors, builders, merchants, etc. Directors: L. J. Llewellyn, Abernant, Glyn Neath farmer; O. Steen, "Fairview," Rockfield, Monmouth, engineer; W. J. Forbes, The Oddfellows Hotel, Glyn Neath, Glam., mining engineer. Secretary: W. I. Forbes. Solicitor: J. M. Davies, 21, Queen Street, Neath, Glam.

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AERONAUTICAL PATENT SPECIFICATIONS

(Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motors. The numbers in brackets are those under which the Specification will be printed and abridged, etc.)

APPLIED FOR IN 1930

Published September 3, 1931

- 4,882. W. HELMORE. Fuel for i.c. engines. (354,398.)
 14,366. G. A. EVANS. Device for indicating to the pilot of an aeroplane when the machine is in or approaching a stalled condition. (354,381.)
 25,153. NAAMLOOZE VENNOOTSCHAP PHILIPS' GLOEILAMPENFABRIEKEN. Devices for indicating position of aeroplanes. (354,563.)
 32,258. H. P. MINER. Aircraft. (354,625.)

APPLIED FOR IN 1931

Published September 3, 1931

- 5,058. C. COHEN-VENEZIAN. Truck for supporting the tail of aeroplanes on land. (354,683.)

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Telephone (2 lines): Holborn, 3211.
 Holborn, 1884.

Telegraphic address: Truditur, Westcent, London.

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